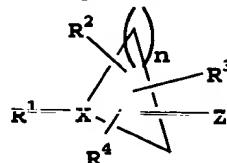


What is Claimed is:

1. A compound having the structure

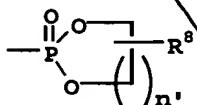


wherein n is an integer from 1 to 5;

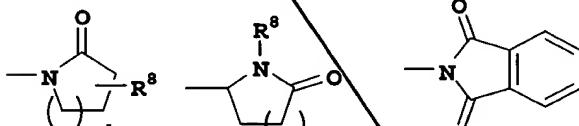
- 5 X is N or C-R⁵ wherein R⁵ is H, halo, alkenyl, alkynyl, alkoxy, alkyl, aryl or heteroaryl;
- 10 Z is a heteroaryl group;
- 15 R¹ is H, alkyl, alkenyl, alkynyl, alkoxy, alkenyloxy, alkynyloxy, (alkyl or aryl)₃Si (where each alkyl or aryl group is independent), cycloalkyl, cycloalkenyl, amino, alkylamino, dialkylamino, alkenylamino, alkynylamino, arylalkylamino, aryl, arylalkyl, arylamino, aryloxy, cycloheteroalkyl, cycloheteroalkylalkyl, heteroaryl, heteroarylamino, heteroaryloxy, arylthio, arylsulfinyl, arylsulfonyl, thio, alkylthio, alkylsulfinyl, alkylsulfonyl, heteroarylthio, heteroarylsulfinyl, heteroarylsulfonyl, halogen, haloalkyl, polyhaloalkyl, polyhaloalkoxy, aminothio, aminosulfinyl, aminosulfonyl,
- 20 25 alkylsulfonylamino, alkenylsulfonylamino, alkynylsulfonylamino, arylsulfonylamino, heteroarylsulfonylamino, alkylaminocarbonyl, arylaminocarbonyl, heteroarylaminocarbonyl, hydroxy, acyl, carboxy, aminocarbonyl, alkylcarbonyl, alkoxycarbonyl, alkylcarbonyloxy, alkylcarbonylamino, arylcarbonyl, arylcarbonyloxy, arylcarbonylamino, heteroarylcarbonyl, heteroarylcarbonyloxy, heteroarylcarbonylamino, cyano, nitro, alkylcarbonylamino, alkynylcarbonylamino,
- 30 alkylaminocarbonylamino, alkenylaminocarbonylamino, alkynylaminocarbonylamino, arylaminocarbonylamino, heteroarylaminocarbonylamino, alkoxycarbonylamino, alkenyloxycarbonylamino, alkynyloxycarbonylamino, aryloxycarbonylamino, heteroaryloxycarbonylamino,

a
cont

aminocarbonylamino, alkylaminocarbonyloxy,
 alkoxy carbonylamino, 1,1-(alkoxyl or aryloxy)alkyl
 (where the two aryl or alkyl substituents can be
 independently defined, or linked to one another to form a
 5 ring), $S(O)_2R^6R^7$, $-NR^6(C=NR^7)alkyl$, $-NR^6(C=NR^7)alkenyl$,
 $-NR^6(C=NR^7)alkynyl$, $-NR^6(C=NR^7)heteroaryl$, $-NR^8(C=NCN)-$
 amino,



pyridine-N-oxide,



10 (where Q is O or H₂ and n' is 0, 1, 2 or 3) or



15 tetrazolyl, pyrazolyl, pyridyl,
 thiazolyl, pyrimidinyl, imidazole, oxazole, or triazole,
 $-PO(R^{13})(R^{14})$, (where R¹³ and R¹⁴ are independently alkyl,
 aryl, alkoxy, aryloxy, heteroaryl, heteroarylalkyl,
 heteroaryloxy, heteroarylalkoxy, cycloheteroalkyl,
 cycloheteroalkylalkyl, cycloheteroalkoxy, or
 cycloheteroalkylalkoxy);

20 R^6 , R^7 , R^8 , R^{8a} and R^9 are the same or different and
 are independently hydrogen, alkyl, haloalkyl, aryl,
 heteroaryl, arylalkyl, cycloalkyl, (cycloalkyl)alkyl, or
 cycloheteroalkyl;

25 and R^1 may be optionally substituted with from one
 to five substituents;

25 R^2 , R^3 and R^4 are the same or different and are
 independently any of the groups set out for R^1 and may be
 optionally independently substituted with from one to
 five substituents, which may be the same or different;

30 including pharmaceutically acceptable salts
 thereof, prodrugs thereof, and all stereoisomers thereof;
 with the proviso that where X is N, n is 4, and Z is

a¹
cont

~~imidazol-4-yl or 5-alkylimidazol-4-yl attached at the 4-position of the ring, then R¹ is other than phenyl or substituted phenyl.~~

Suh G¹
2. The compound as defined in Claim 1 wherein Z is

5 a heteroaryl group containing 1 to 4 heteroatoms, at least one of which is a nitrogen atom, the heteroaryl group being attached to the rest of the molecule via an available nitrogen or carbon atom.

10 3. The compound as defined in Claim 1 wherein at least one of R¹, R², R³ and R⁴ is aryl or heteroaryl.

15 4. The compound as defined in Claim 1 wherein X is N.

5. The compound as defined in Claim 1 wherein X is C-R⁵.

15 6. The compound as defined in Claim 1 wherein Z is imidazole, aminoimidazole, alkylimidazole, alkylthioimidazole, alkylthio(amino)imidazole, amino(alkyl)imidazole, oxazole, (alkanoylamino)imidazole, thiazole, benzimidazole, aminothiazole, aminooxazole, 20 aminooxadiazole, dialkylimidazole, alkyl(alkanoylamino)imidazole, alkyl(amino)imidazole, arylaminocarbonylamino(alkyl)imidazole, alkoxycarbonylamino(alkyl)imidazole, alkylcarbonylamino(alkyl)imidazole, aminotriazole or 25 diaminopyrimidine.

7. The compound as defined in Claim 1 wherein R¹ is aryl or heteroaryl.

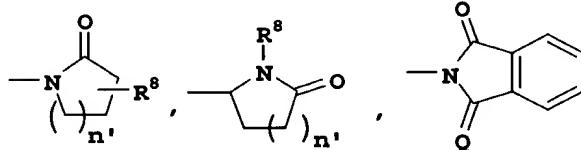
8. The compound as defined in Claim 1 wherein the R¹ group may be substituted within from one to five of the 30 following groups:

alkyl, alkenyl, alkynyl, alkoxy, alkenyloxy, alkynyoxy, (alkyl or aryl)₃Si (where each alkyl or aryl group is independent), cycloalkyl, cycloalkenyl, amino, alkylamino, dialkylamino, alkenylamino, alkynylamino, 35 arylalkylamino, aryl, arylalkyl, arylamino, aryloxy, cycloheteroalkyl, cycloheteroalkylalkyl, heteroaryl, heteroarylamino, heteroaryloxy, arylthio, arylsulfinyl,

5

arylsulfonyl, thio, alkylthio, alkylsulfinyl,
 alkylsulfonyl, heteroarylthio, heteroarylsulfinyl,
 heteroarylsulfonyl, halogen, haloalkyl, polyhaloalkyl
 such as CF_3 and CF_3CH_2 , polyhaloalkyloxy such as CF_3O and
 $\text{CF}_3\text{CH}_2\text{O}$, aminothio, aminosulfinyl, aminosulfonyl,
 alkylsulfonylamino, alkenylsulfonylamino,
 alkynylsulfonylamino, arylsulfonylamino,
 heteroarylsulfonylamino, alkylaminocarbonyl,
 arylaminocarbonyl, heteroarylaminocarbonyl, hydroxy,
 10 acyl, carboxy, aminocarbonyl, alkylcarbonyl,
 alkoxy carbonyl, alkylcarbonyloxy, alkylcarbonylamino,
 arylcarbonyl, arylcarbonyloxy, arylcarbonylamino,
 heteroarylcarbonyl, heteroarylcarbonyloxy,
 heteroarylcarbonylamino, cyano, nitro,
 15 alkenylcarbonylamino, alkynylcarbonylamino,
 alkylaminocarbonylamino, alkenylaminocarbonylamino,
 alkynylaminocarbonylamino, arylaminocarbonylamino,
 heteroarylaminocarbonylamino, alkoxy carbonylamino,
 alkenyloxycarbonylamino, alkynyloxycarbonylamino,
 20 aryloxycarbonylamino, heteroaryloxycarbonylamino,
 aminocarbonylamino, alkylaminocarbonyloxy, 1,1-(alkoxy
 or aryloxy)alkyl (where the two aryl or alkyl
 substituents can be independently defined, or linked to
 one another to form a ring, such as 1,3-dioxane or 1,3-
 25 dioxolane), $\text{S}(\text{O})_2\text{R}^6\text{R}^7$, $-\text{NR}^6(\text{C}=\text{NR}^7)\text{alkyl}$,

$\text{NR}^6(\text{C}=\text{NR}^7)\text{alkenyl}$, $-\text{NR}^6(\text{C}=\text{NR}^7)\text{alkynyl}$,
 $\text{NR}^6(\text{C}=\text{NR}^7)\text{heteroaryl}$, $-\text{NR}^8(\text{C}=\text{NCN})-\text{amino}$, pyridine-N-oxide,

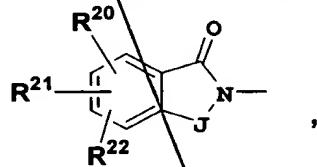


30

(where Q is O or H₂ and n' is 0, 1, 2 or 3) or $-\text{C}=\text{CH}-\text{C}(=\text{O})\text{R}^{8a}$;
 tetrazolyl, pyrazolyl, pyridyl, thiazolyl, pyrimidinyl,

imidazole, oxazole or triazole; $-\text{PO}(\text{R}^{13})(\text{R}^{14})$, (where R^{13} and R^{14} are independently alkyl, aryl, alkoxy, aryloxy, heteroaryl, heteroarylalkyl, heteroaryloxy, heteroarylalkoxy, cycloheteroalkyl, cycloheteroalkylalkyl, 5 cycloheteroalkoxy, or cycloheteroalkylalkoxy);
 R⁶, R⁷, R⁸, R^{8a} and R⁹ are independently hydrogen, alkyl, haloalkyl, aryl, heteroaryl, arylalkyl, cycloalkyl, (cycloalkyl)alkyl or cycloheteroalkyl, which substituents may be the same or different from each other
 10 and may be the same or different from the base R¹ group.

G1
 9. The compound as defined in Claim 1 wherein R¹ is substituted with one to five of the following substituents: alkyl, alkylaminocarbonyl, arylaminocarbonyl, heteroarylaminocarbonyl, 15 alkylcarbonylamino, heteroaryl, halo, aryl, cycloalkylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, alkoxy carbonylamino, guanidinyl, nitro, cycloheteroalkyl, aryloxycarbonylamino, heteroaryloxylcarbonylamino, uriedo (where the uriedo 20 nitrogens may be substituted with alkyl, aryl or heteroaryl), heterocyclic carbonylamino (where the heterocycle is connected to the carbonyl group via a nitrogen or carbon atom), alkylsulfonylamino, arylsulfonylamino, heteroarylsulfonylamino,



25

Where J is: CHR^{23} , $-\text{C}(=\text{O})-$, $-\text{CH}(\text{R}^{24})\text{CH}(\text{R}^{25})-$ or $-\text{C}(\text{R}^{24})=\text{C}(\text{R}^{25})-$;

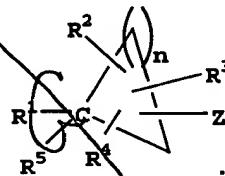
R²³, R²⁴ and R²⁵ are independently hydrogen, alkyl, 30 alkenyl, alkynyl, aryl, arylalkyl, heteroaryl, heteroarylalkyl, cycloalkyl, or cycloalkylalkyl;
 R²⁰, R²¹, R²² are independently hydrogen, halo, alkyl, alkenyl, alkoxy, aryloxy, aryl, arylalkyl, alkylmercapto, arylmercapto, cycloalkyl, cycloalkylalkyl,

~~heteroaryl, heteroarylalkyl, hydroxy or haloalkyl; and these preferred substituents may either be directly attached to R¹, or attached via an alkylene chain at an open position, which substituents may be the same or different from each other and may be the same or different from the base R¹ group.~~

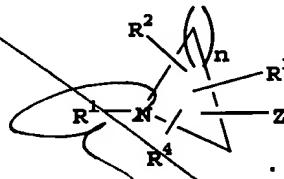
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5 ~~different from each other and may be the same or different from the base R¹ group.~~

10. The compound as defined in Claim 1 wherein Z is imidazole, aminoimidazole, alkylimidazole, alkylthioimidazole, alkylthio(amino)imidazole, 10 amino(alkyl)imidazole or (acetylamino)imidazole.

11. The compound as defined in Claim 1 having the formula

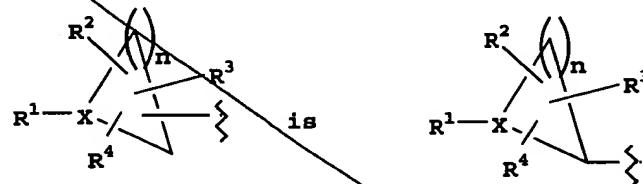


15 ~~12. The compound as defined in Claim 1 having the formula~~



20 13. The compound as defined in Claim 7 wherein R¹ is aryl or heteroaryl and n is 1 or 4

14. The compound as defined in Claim 1 wherein the moiety



25 15. The compound as defined in Claim 1 wherein R² and R³ are independently H, lower alkyl, lower alkoxy or aryl, and R⁴ and R⁵ are each hydrogen.

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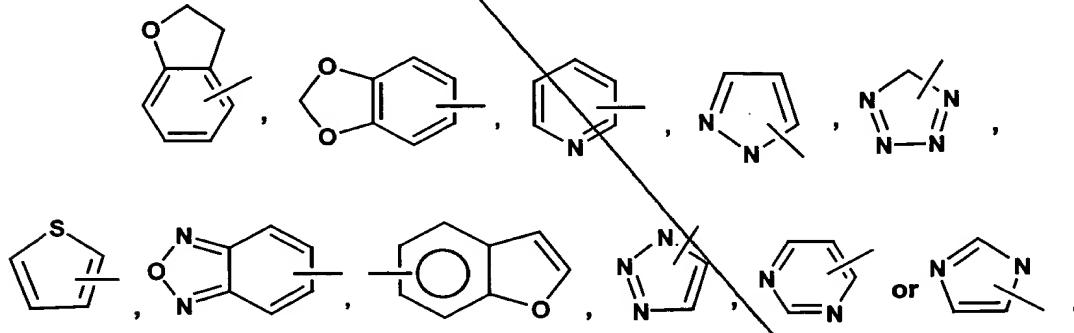
16. The compound as defined in Claim 1 wherein n is 1 or 4.

part A2
5 17. The compound as defined in Claim 1 wherein n is 4, R² and R³ are independently H or lower alkyl, and R⁴ and R⁵ are each H, and R¹ is aryl or heteroaryl.

18. The compound as defined in Claim 1 wherein R¹ is phenyl, substituted phenyl or heteroaryl.

10 19. The compound as defined in Claim 1 wherein R¹ is phenyl, halophenyl, dihalophenyl, alkylphenyl, nitrophenyl, dialkoxyphenyl, alkoxy(halo)phenyl, alkoxyphenyl, halo(nitro)phenyl, trifluoromethylphenyl, biphenyl, heteroarylphenyl, cycloheteroalkylphenyl, alkylthiophenyl, trialkoxyphenyl or halo(dialkoxy)phenyl, phenylalkyl,

15



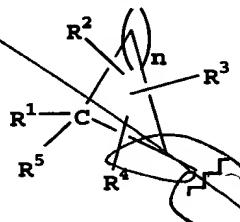
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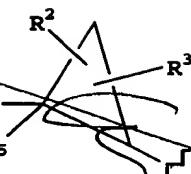
Sub G1
20. The compound as defined in Claim 1 wherein R¹, R², R³ and/or R⁴ may be joined together with the N atom and/or carbons to which they are attached to form a non-aromatic ring.

21. The compounds as defined in Claim 11 wherein

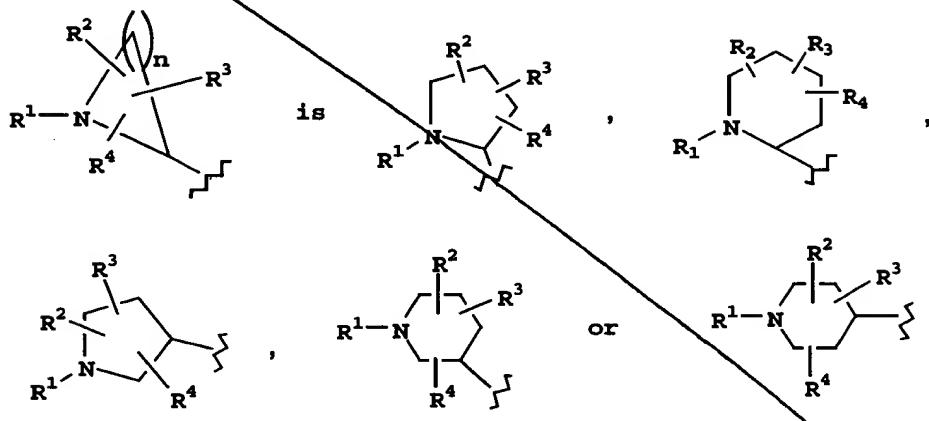
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is





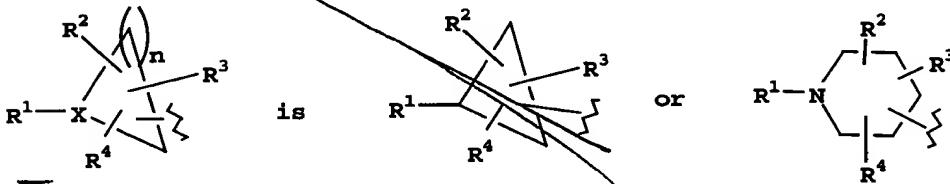
22. The compound as defined in Claim 1 wherein



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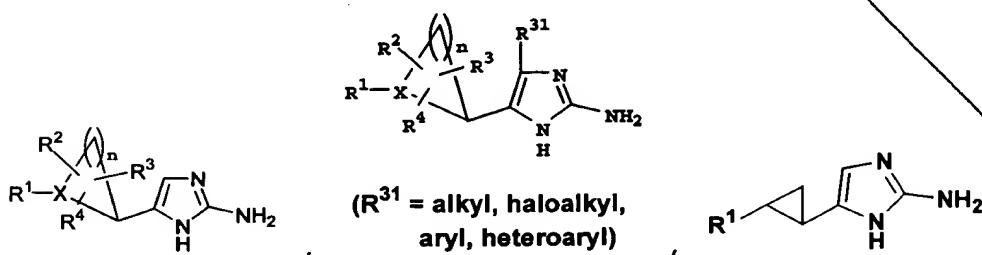
23. The compound as defined in Claim 1 wherein n is 1, X is CH , R^2 and R^3 are independently lower alkyl or H.

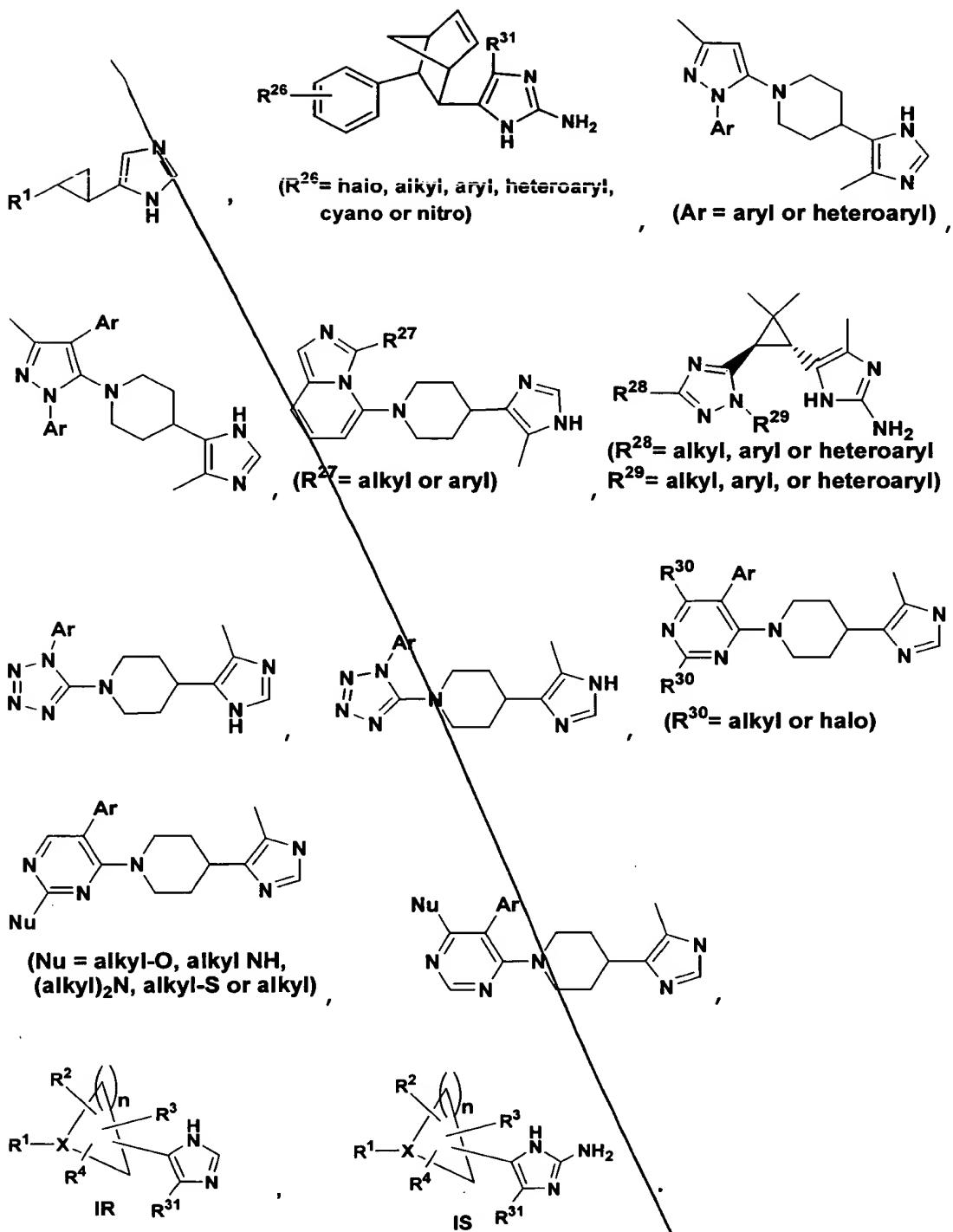
24. The compound as defined in Claim 1 wherein



25. The compound as defined in Claim 1 having the structure

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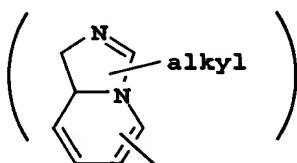
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26. The compound as defined in Claim 1 wherein R¹ is 4-bromophenyl, 4-chlorophenyl, 3-bromophenyl, 3,5-dimethoxyphenyl, 4-methylphenyl, 2,4-dichlorophenyl, 3-nitrophenyl, 2-chlorophenyl, 3-chlorophenyl, 2,5-dimethylphenyl, 2-methylphenyl, 3-methylphenyl, 4-

- a⁵
cont*
- methylphenyl, 2,3-dimethoxyphenyl, 4-trifluoromethylphenyl, 3-trifluoromethoxyphenyl, 4-biphenyl, 2-bromo-4,5-dimethoxyphenyl, 4-methylthiophenyl, 3,4,5-trimethoxyphenyl, 4-fluorophenyl, 2-chloro-3,4-dimethoxyphenyl, 4-nitrophenyl, benzyl, 3-methoxyphenyl, 4-methoxyphenyl, 2-methoxyphenyl, 3-bromo-4-fluorophenyl, 2-fluoro-5-methoxyphenyl, 3-chloro-4-nitrophenyl, 2-fluoro-4-bromophenyl, 3-ethoxyphenyl, 3-trifluoromethylphenyl, 3,5-difluorophenyl, 3,5-dichlorophenyl, 3,5-bistrifluoromethylphenyl, 4-fluorophenyl, 3-trifluorophenyl, 3-(N-pyrrolyl)phenyl, 3-(N-pyrrolidinyl)phenyl, 3-(N-pyrazolinyl)phenyl, 3-(N-imidazolyl)phenyl, phenyltetrazole, 1-(2,4-dihalo-5-alkoxyphenyltetrazol-5-yl, alkylphenyltetrazole,
- halophenyltetrazol, 1-(2-alkoxy-5-halophenyl)tetrazol-5-yl, 1-(3-alkyl-4-halophenyl)tetrazol-5-yl, alkoxyphenyltetrazole, alkyl(halo)phenyltetrazole, alkoxy(halo)phenyltetrazole, alkoxy(alkyl)(halo)phenyltetrazole,
- phenyl-alkyl-pyrazole, alkoxyphenyl-alkyl-pyrazole, halophenyl-alkyl-pyrazole, alkyl(halo)phenyl-alkyl-pyrazole, alkylphenyl-alkyl-pyrazole, alkoxy(halo)phenyl-alkyl-pyrazole, dihalophenyl-alkyl-pyrazole, dialkylphenyl-alkyl-pyrazole, alkoxyphenyl-alkyl-pyrazole, halophenyl-haloalkyl-pyrazole, alkoxyphenyl(alkyl)(halo)pyrazole, phenylpyrimidine, phenyl(halo)pyrimidine, diphenylpyrimidine, halophenyl(halo)pyrimidine, dihalopyrimidine, diphenyl(halo)pyrimidine,
- halo(phenyl)pyrimidine, dialkyl(halo)pyrimidine, dihalophenylpyrimidine, alkylphenylpyrimidine, alkoxyphenylpyrimidine, alkylphenyl(alkoxy)pyrimidine, dialkylphenyl(alkoxy)pyrimidine, alkyl(halo)phenyl(alkoxy)pyrimidine,
- alkoxy(halo)phenyl(alkoxy)pyrimidine, dihalophenyl(dialkylamino)pyrimidine, heteroaryl(dihalophenyl)pyrimidine, halophenylpyrimidine,

alkoxy(phenyl)pyrimidine, haloalkoxyphenylpyrimidine,
 phenoxy(phenyl)pyrimidine, heteroaryl(phenyl)pyrimidine,
 dialkoxyphenylpyrimidine, dialkylphenylpyrimidine,
 cycloheteroalkyl(phenyl)pyrimidine,

- Q5
cont*
- 5 alkoxy(halo)phenylpyrimidine,
 cycloheteroalkyl(dihalophenyl)pyrimidine,
 halophenyl(alkoxy)pyrimidine,
 alkyl(halo)phenylpyrimidine, nitrophenylpyrimidine,
 dihalophenyl(alkoxy)pyrimidine, carboxyphenylpyrimidine,
 10 alkylcarbonylphenylpyrimidine, naphthylpyrimidine,
 alkylthiophenylpyrimidine, phenylpyridine,
 halophenylpyridine, alkyl(halo)phenylpyridine,
 dihalophenylpyridine, haloalkoxyphenylpyridine,
 alkyl(halophenyl)triazole, alkyl(halo)phenyl-(alkyl)-
 15 triazole, alkylimidazopyridine



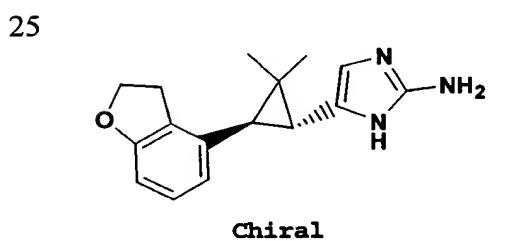
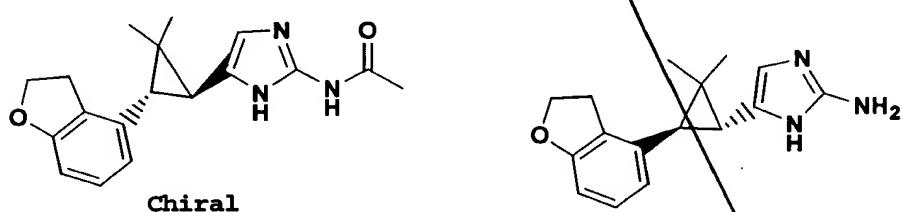
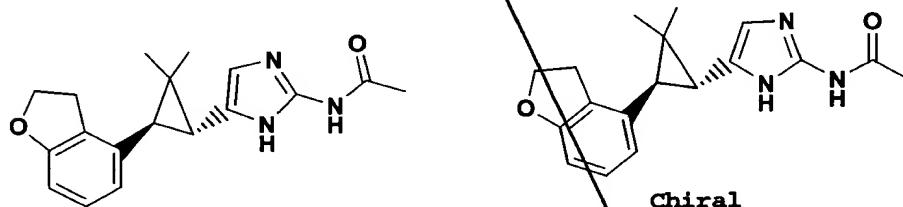
phenylimidazopyridine, halophenylimidazopyridine,
 dihalophenylimidazopyridine, alkoxyphenylimidazopyridine.

- 20 27. The compound as defined in Claim 1 wherein
 X is CH or N;
 n is 1 or 4;
 R² is CH₃ or H;
 R³ is CH₃ or H;
 25 R⁴ is H;
 R¹ is 3-chlorophenyl, 3,5-dichlorophenyl, 3-chloro-
 4-fluorophenyl, 2,3-dihydrobenzofuran-4-yl, 3-methyl-4-
 fluorophenyl, 3-phenyl-4-fluorophenyl, 2-fluoro-5-
 methoxyphenyl, 2-methoxy-5-chlorophenyl, 3-chloro-5-
 30 methoxyphenyl, 3-ethyl-4-fluorophenyl, 1-phenyltetrazol-
 5-yl, 3-(2-fluorophenylcarbonylamino)pyridin-2-yl,
 1-(2,4-dichloro-5-methoxyphenyl)tetrazol-5-yl,
 1-(3-chlorophenyl)tetrazol-5-yl,
 1-(3-chloro-4-methyl)tetrazol-5-yl,

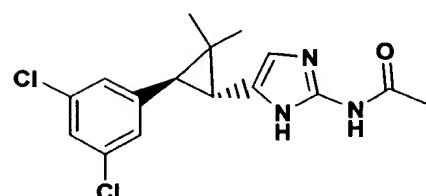
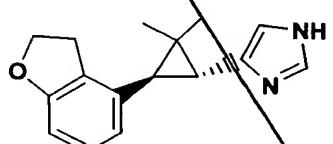
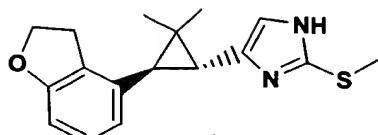
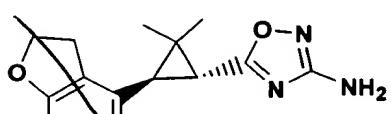
- Q5*
cont
- 1- (3-methylphenyl)tetrazol-5-yl,
1-(2-chlorophenyl)tetrazol-5-yl,
1-(2-methoxy-5-chloro)tetrazol-5-yl,
2-(propylcarbonylamino)phenyl,
5 1-(3-methyl-4-chlorophenyl)tetrazol-5-yl,
1-(2-methoxy-5-chlorophenyl)tetrazol-5-yl,
1-(3-methoxyphenyl)tetrazol-5-yl,
1-(2-methoxy-5-chlorophenyl)tetrazol-5-yl,
1-(3-chlorophenyl)-3-methylpyrazol-5-yl,
10 1-(3-fluorophenyl)-3-methylpyrazol-5-yl,
1-(3-methoxyphenyl)-3-methylpyrazol-5-yl,
1-(3,5-dichlorophenyl)-3-methylpyrazol-5-yl,
1-(3-chlorophenyl)-3-ethylpyrazol-5-yl,
1-(3-chloro-4-methylphenyl)-3-methylpyrazol-5-yl,
15 1-(2,4-dimethylphenyl)-3-methylpyrazol-5-yl,
1-(3-chloro-4-fluorophenyl)-3-methylpyrazol-5-yl,
1-(3-trifluoromethylphenyl)-3-methylpyrazol-5-yl,
1-(3-chlorophenyl)-3-trifluoromethylpyrazol-5-yl,
1-(3-methylphenyl)3-methylpyrazol-5-yl,
20 1-(3-chlorophenyl)-3-ethylpyrazol-5-yl,
5-(3-chloro-4-fluorophenyl)pyrimidin-4-yl,
5-(2-chlorophenyl)pyrimidin-4-yl,
5-(3-methylphenyl)pyrimidin-4-yl,
5-(3-trifluoromethylphenyl)pyrimidin-4-yl,
25 5-(2,4-dichlorophenyl)pyrimidin-4-yl,
5-(2,5-dimethylphenyl)pyrimidin-4-yl,
5-(3,4-dichlorophenyl)pyrimidin-4-yl,
5-(2,3-dimethylphenyl)pyrimidin-4-yl,
5-(2-methoxy-5-chlorophenyl)pyrimidin-4-yl,
30 5-(2-methoxy-5-fluorophenyl)pyrimidin-4-yl,
5-(3-methyl-4-fluorophenyl)pyrimidin-4-yl,
3-(3-methyl-4-fluorophenyl)pyridin-2-yl,
3-(3-chloro-4-fluorophenyl)pyridin-2-yl,
3-(3-trifluoromethoxyphenyl)pyridin-2-yl,
35 5-(3-chloro-4-fluorophenyl)-2-methoxy-pyrimidin-4-yl,
5-(3-chloro-4-fluorophenyl)-2-dimethylamino-pyrimidin-4-
yl,

- C5*
cont
- 5-(3-chloro-4-fluorophenyl)-2-morpholinyl-pyrimidin-4-yl,
 1-(3-chlorophenyl)-3-methyltriazol-5-yl,
 1-(3-chloro-4-methylphenyl)-3-methyltriazol-5-yl,
 5-(2,5-dichlorophenyl)pyrimidin-4-yl,
 5-(3-chlorophenyl)pyrimidin-4-yl,
 5-(3-trifluoromethoxyphenyl)pyrimidin-4-yl,
 5-(2-chlorophenyl)-2-methoxypyrimidin-4-yl,
 5-(3-chlorophenyl)-2-methoxypyrimidin-4-yl,
 5-(3-trifluoromethylphenyl)-2-methoxypyrimidin-4-yl,
 10 5-(2,4-dichlorophenyl)-2-methoxypyrimidin-4-yl,
 5-(3-methylphenyl)-2-methoxypyrimidin-4-yl,
 5-(2,5-dimethylphenyl)-2-methoxypyrimidin-4-yl, or
 5-(3-methyl-4-fluorophenyl)-2-methoxypyrimidin-4-yl;
 Z is 2-amino-5-methyl-imidazol-4-yl,
 15 2,5-dimethylimidazol-4-yl, 2-amino-5-ethyl-imidazol-4-yl,
 2-amino-5-isopropyl-imidazol-4-yl, 2-aminocarbonylamino-
 5-methyl-imidazol-4-yl, 5-methyl-imidazol-4-yl, imidazol-
 4-yl, or 4-methylimidazol-5-yl.

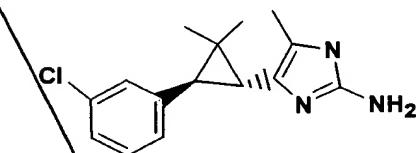
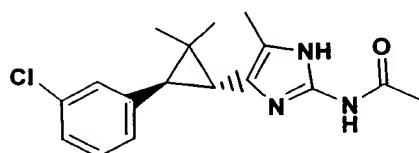
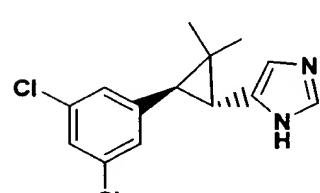
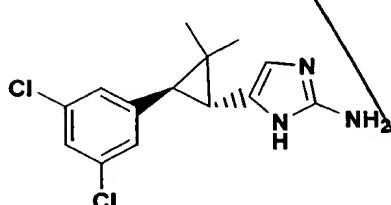
28. The compound as defined in Claim 1 having the
 20 structure



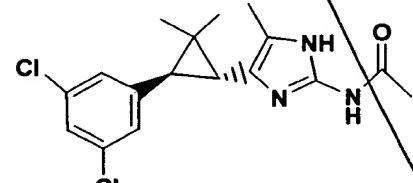
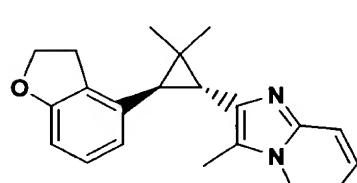
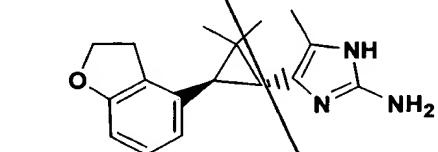
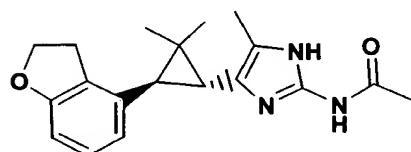
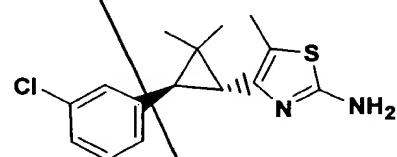
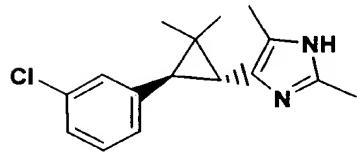
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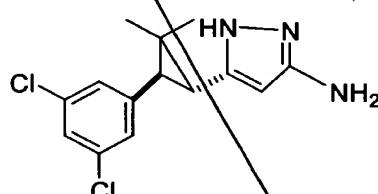
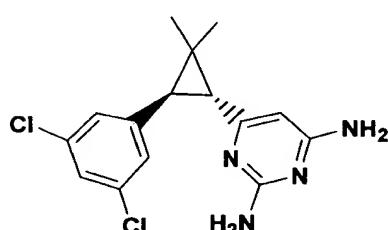
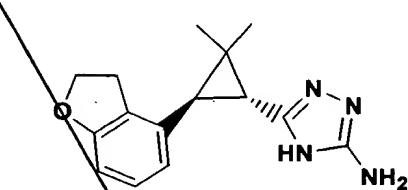
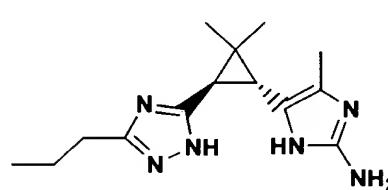
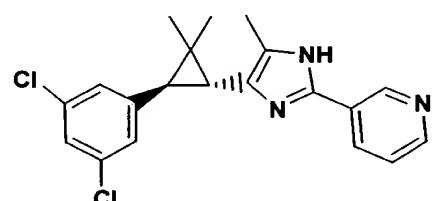
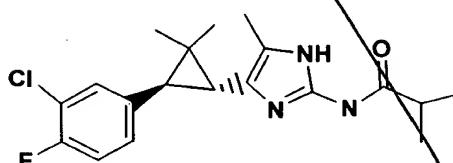
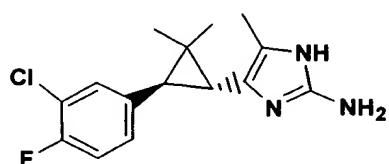
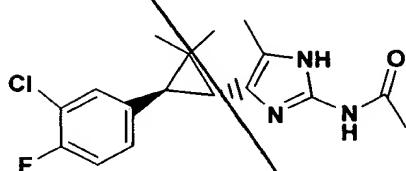
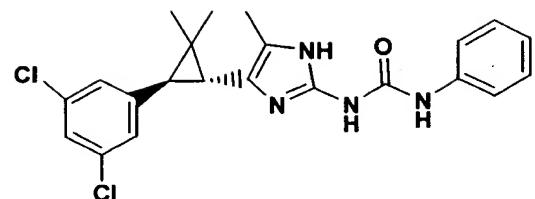
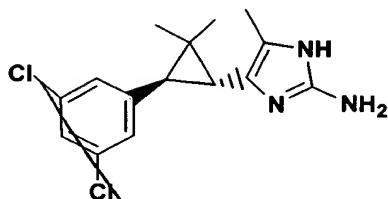
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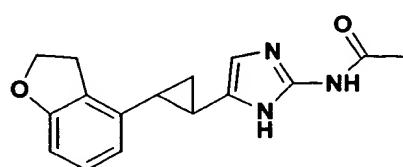
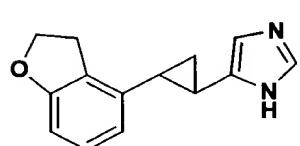
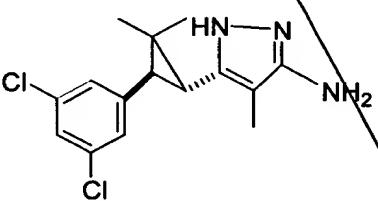
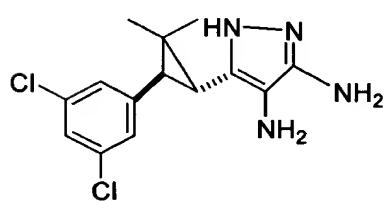
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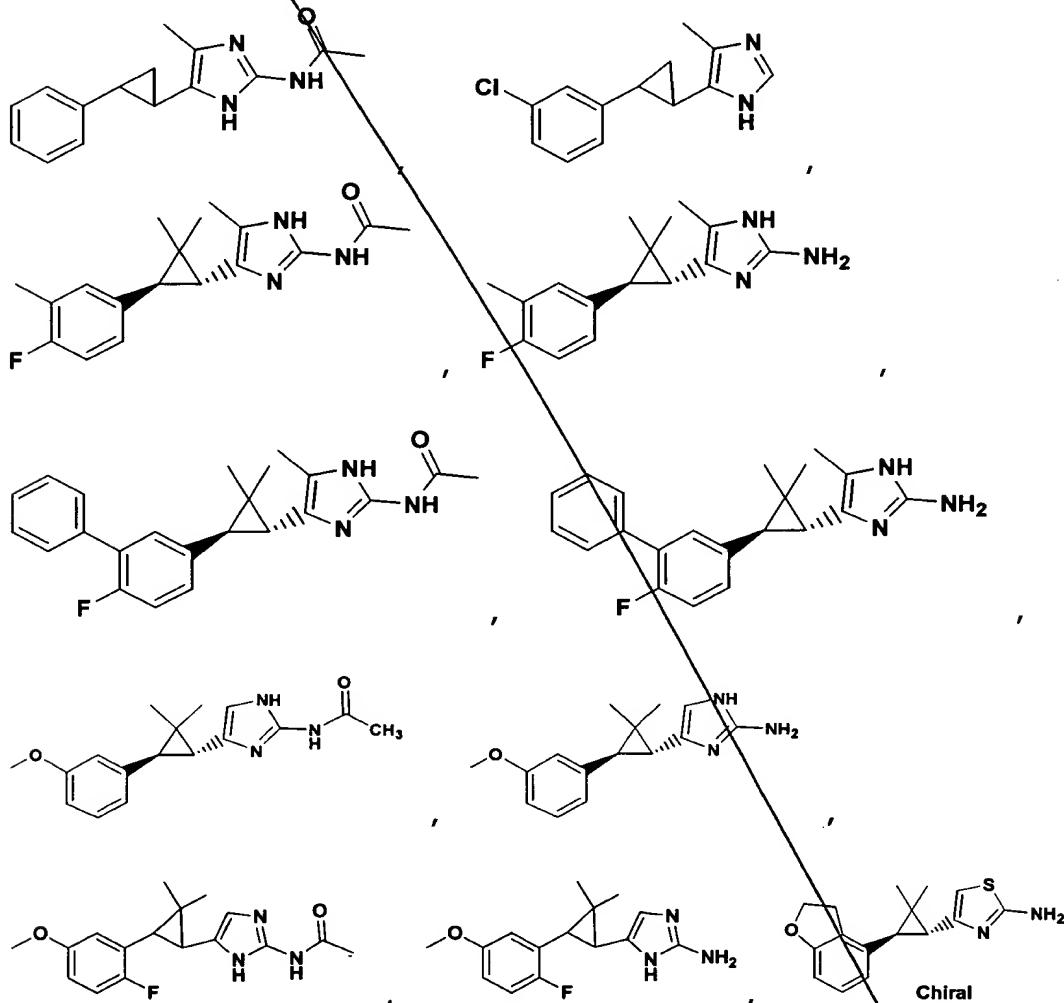


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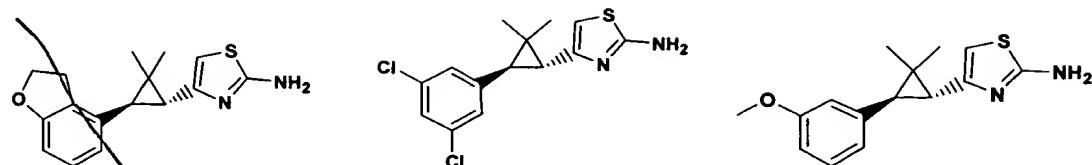


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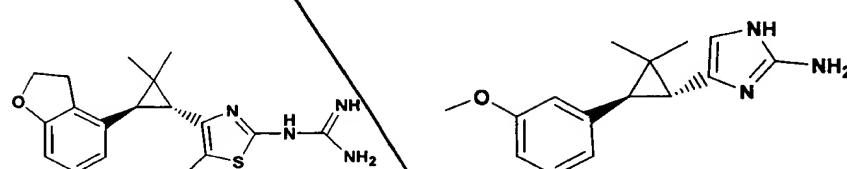
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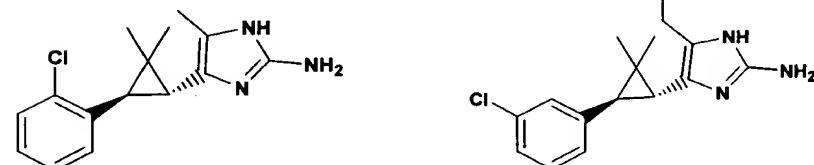
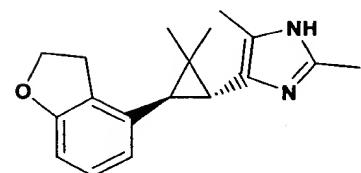
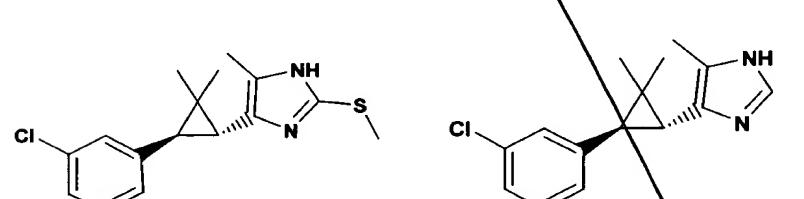
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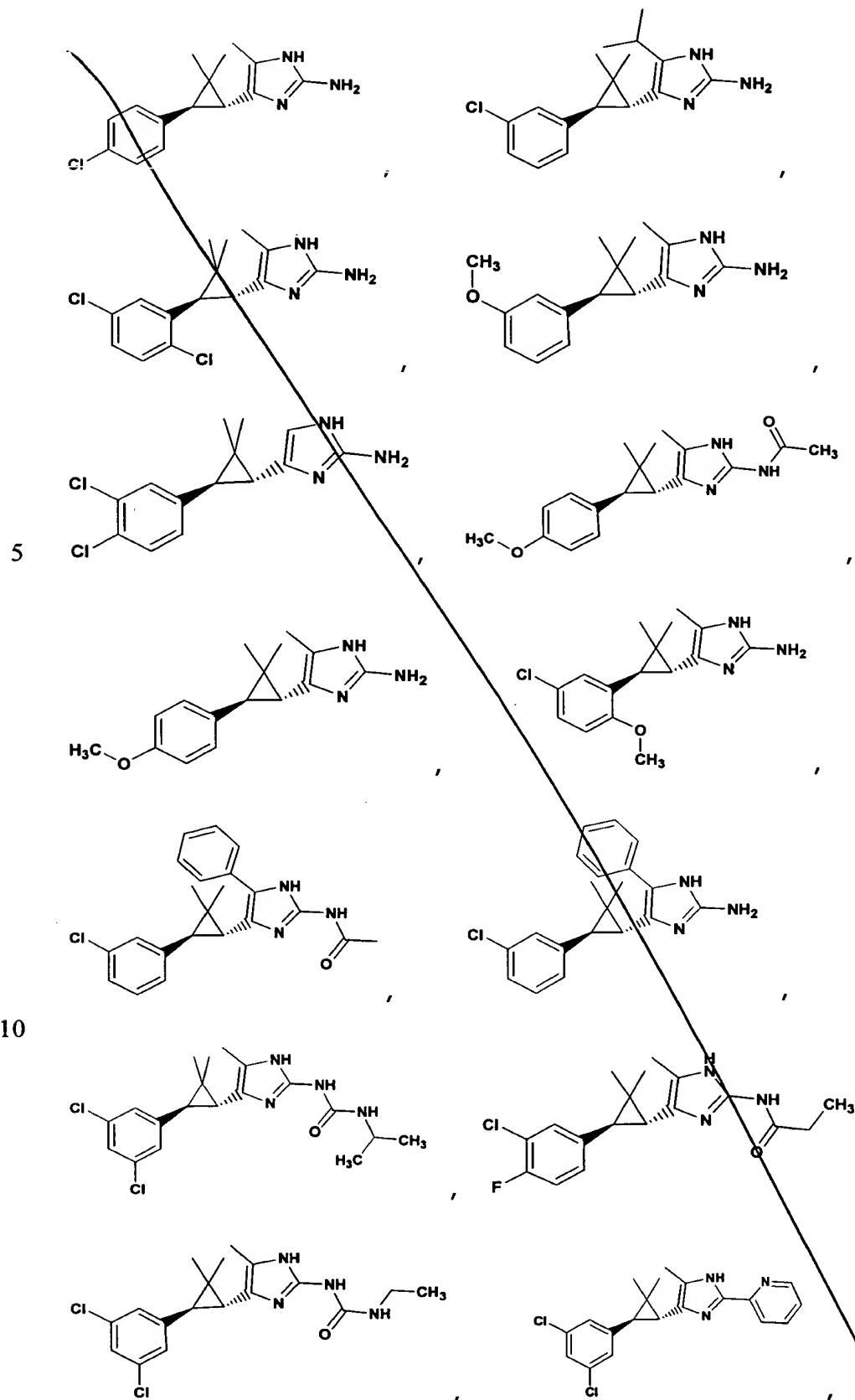
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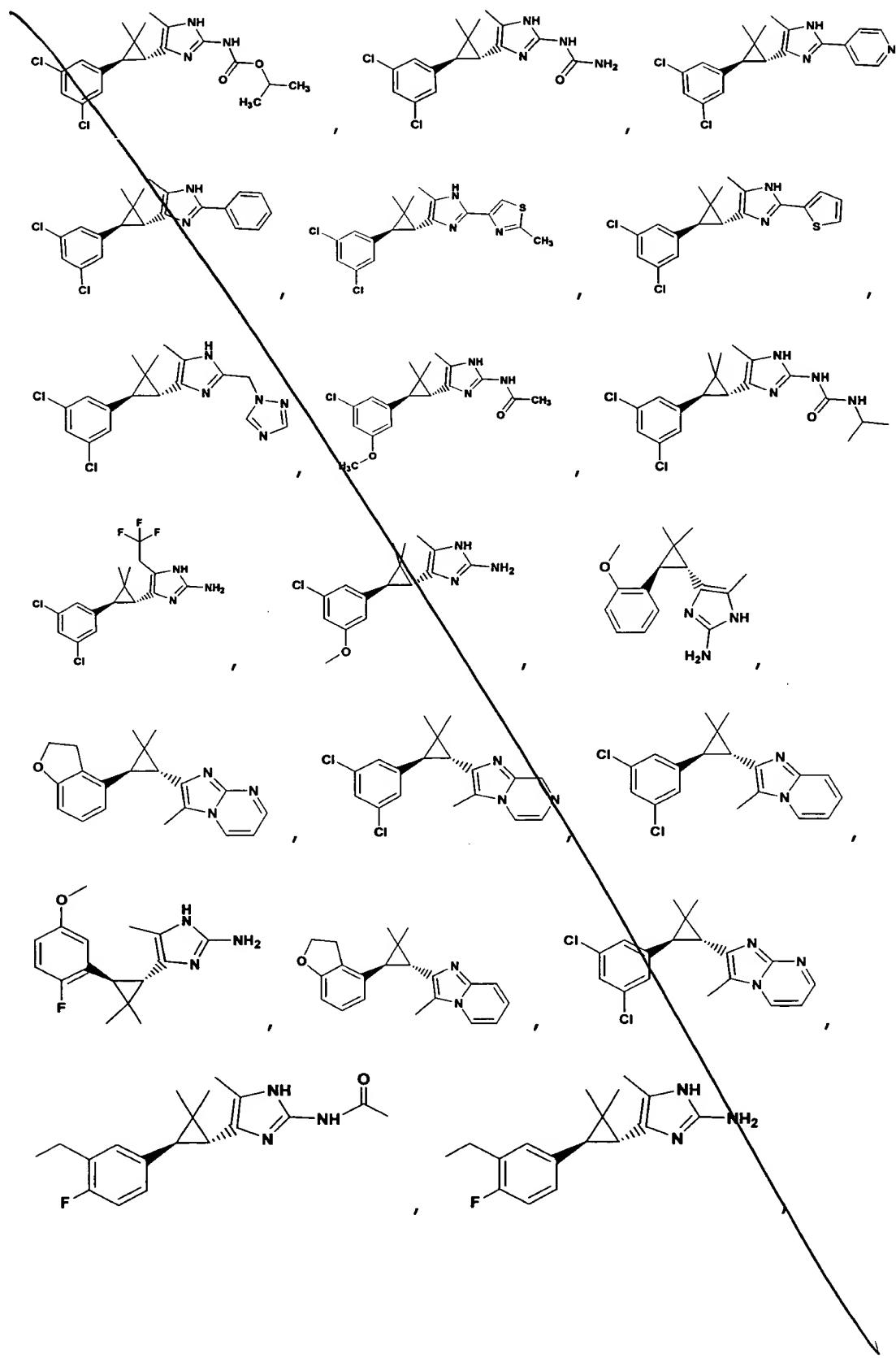


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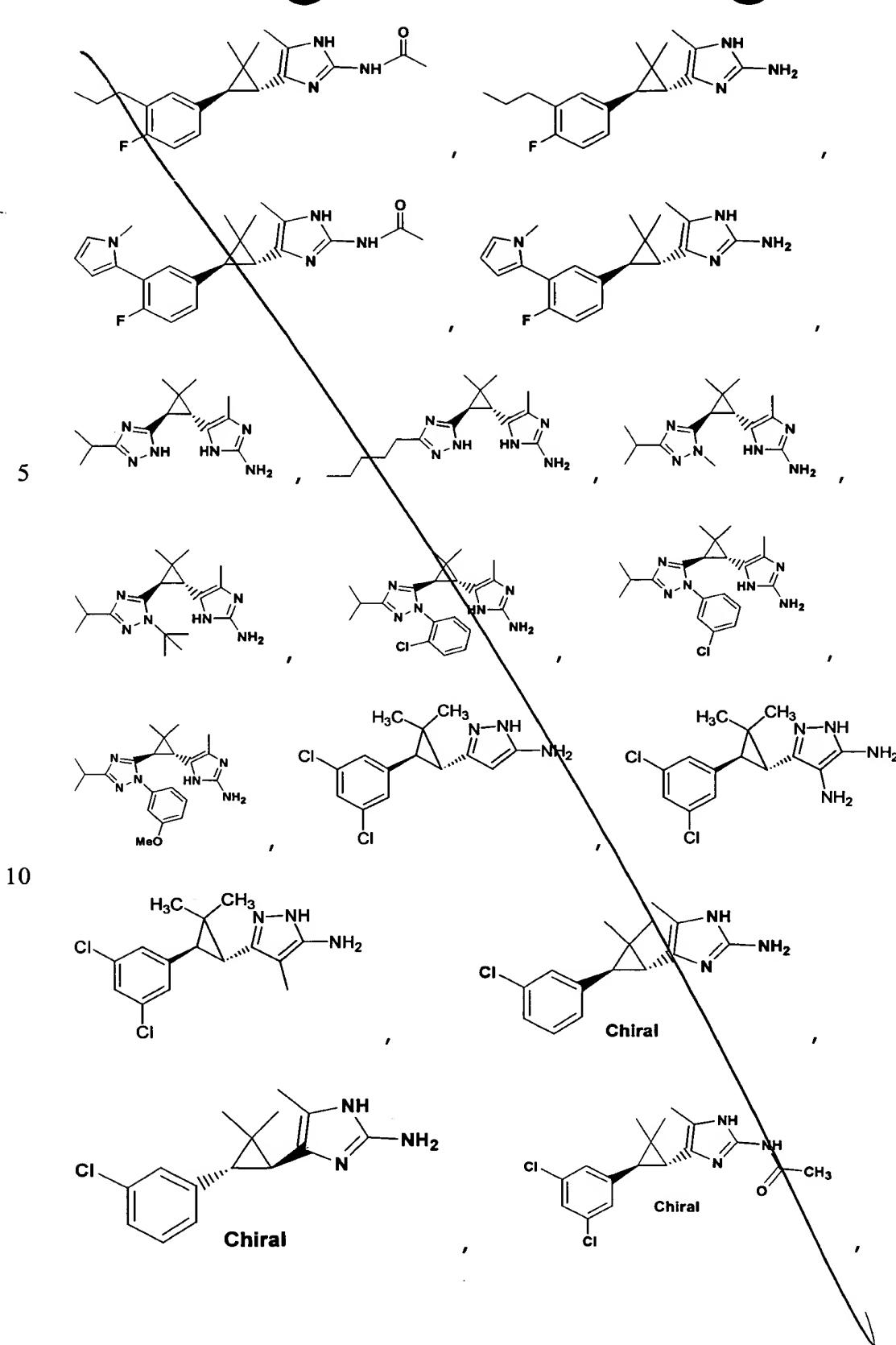
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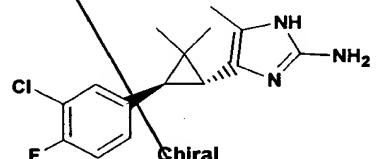
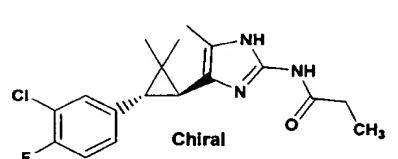
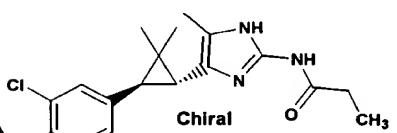
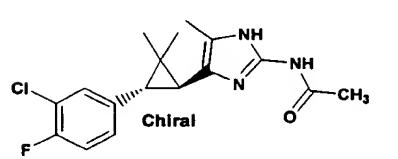
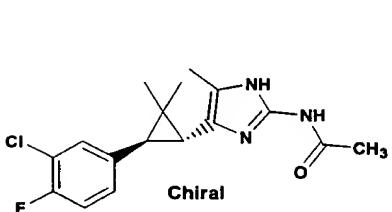
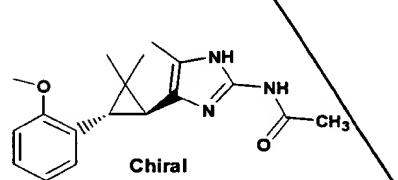
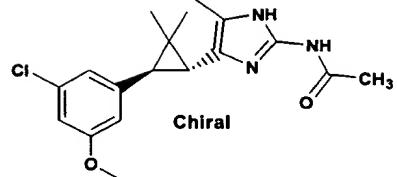
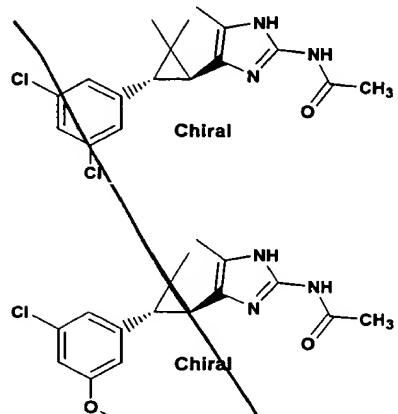
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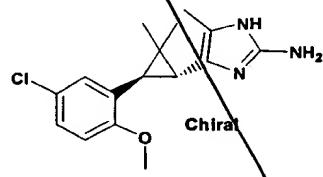
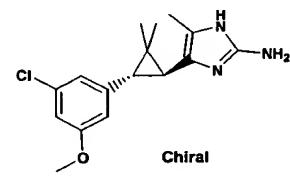
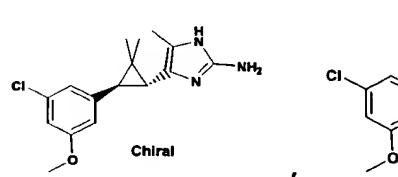
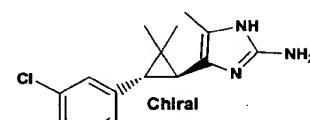
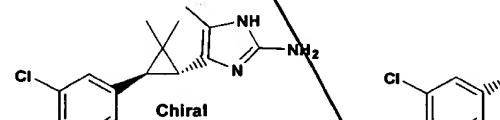
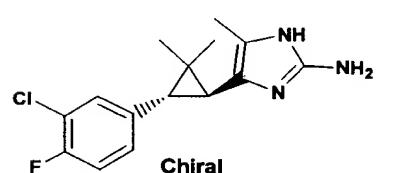


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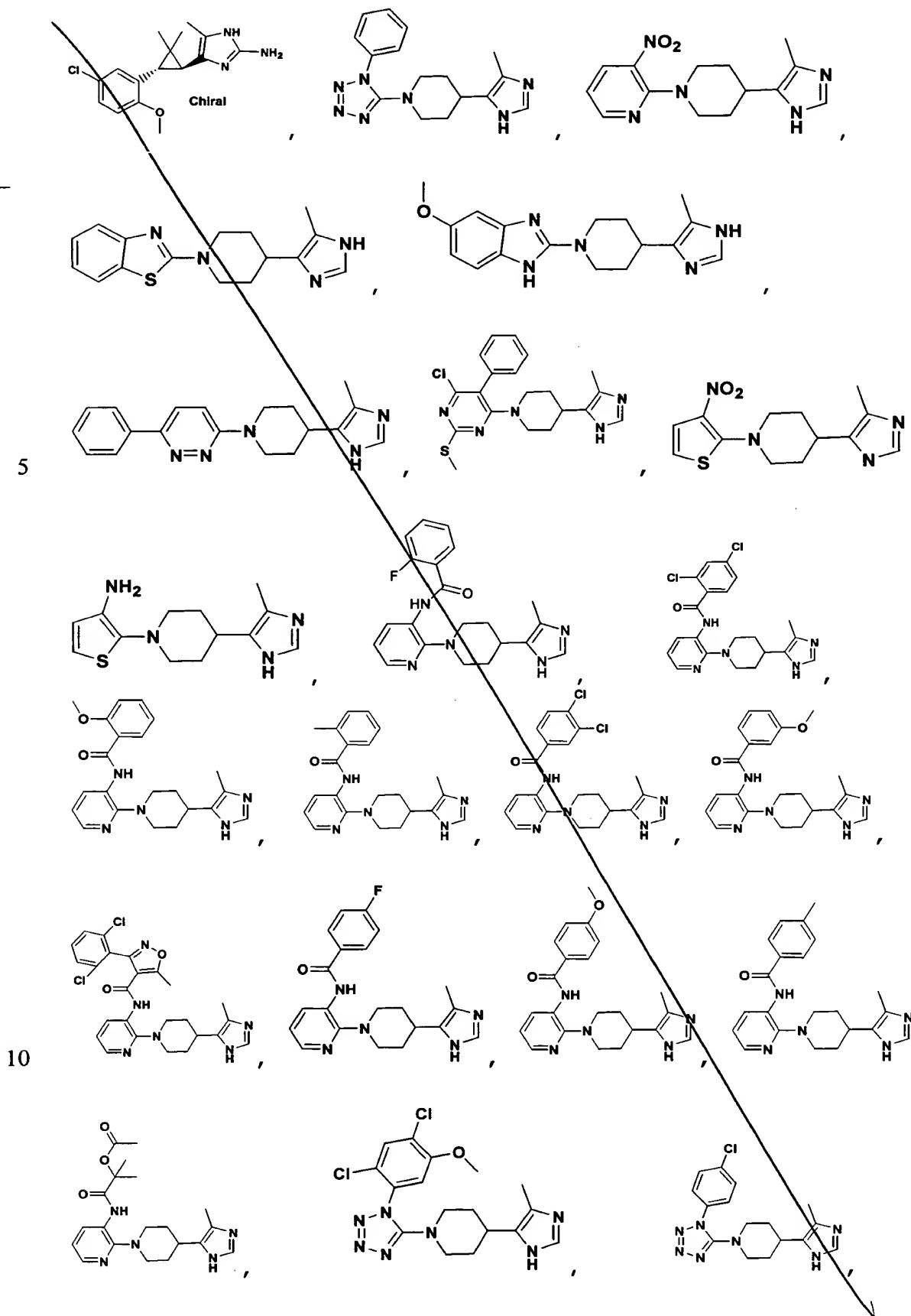


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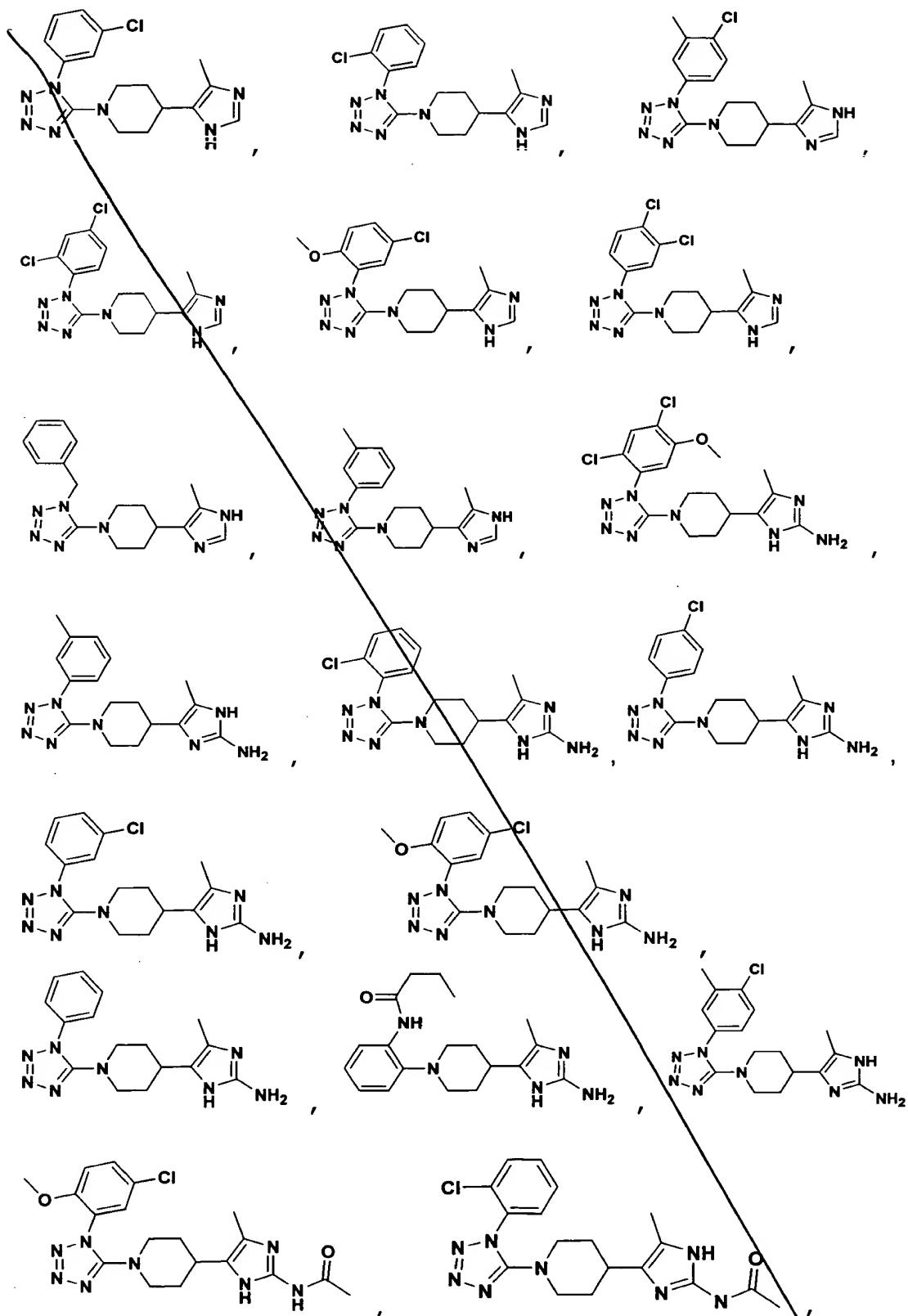
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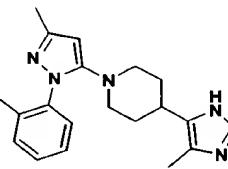
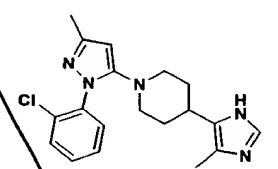
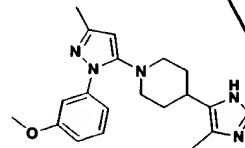
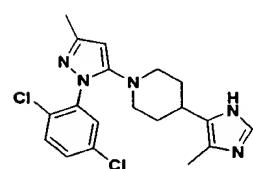
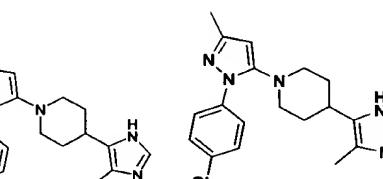
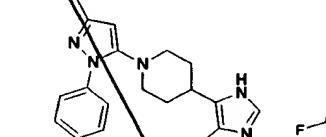
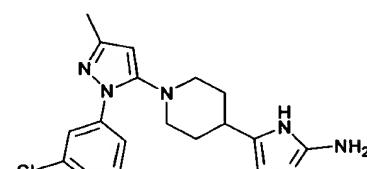
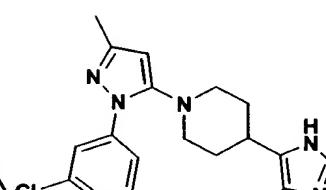
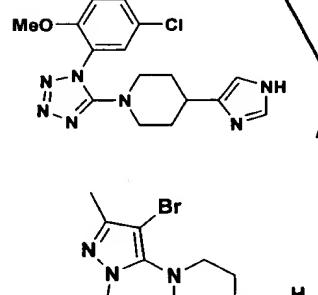
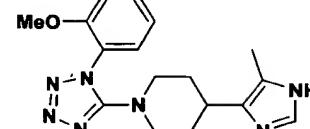
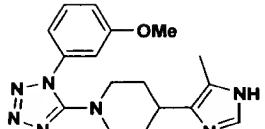
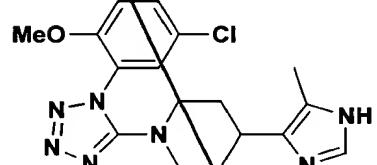
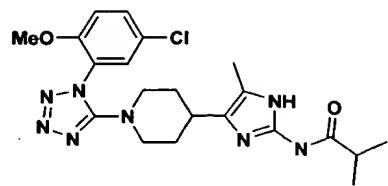
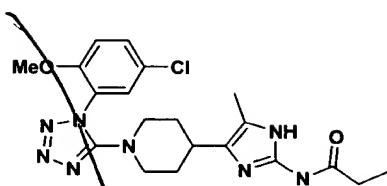


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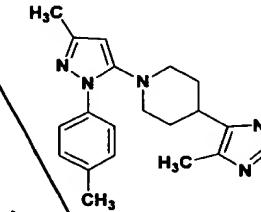
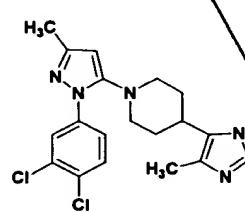
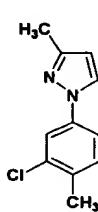
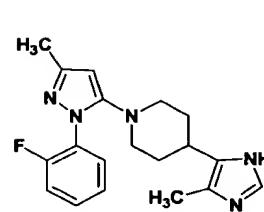
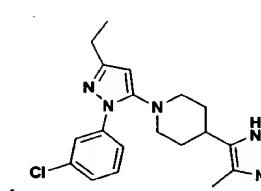
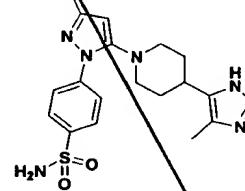
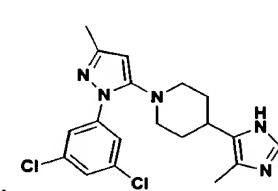
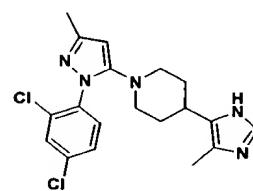


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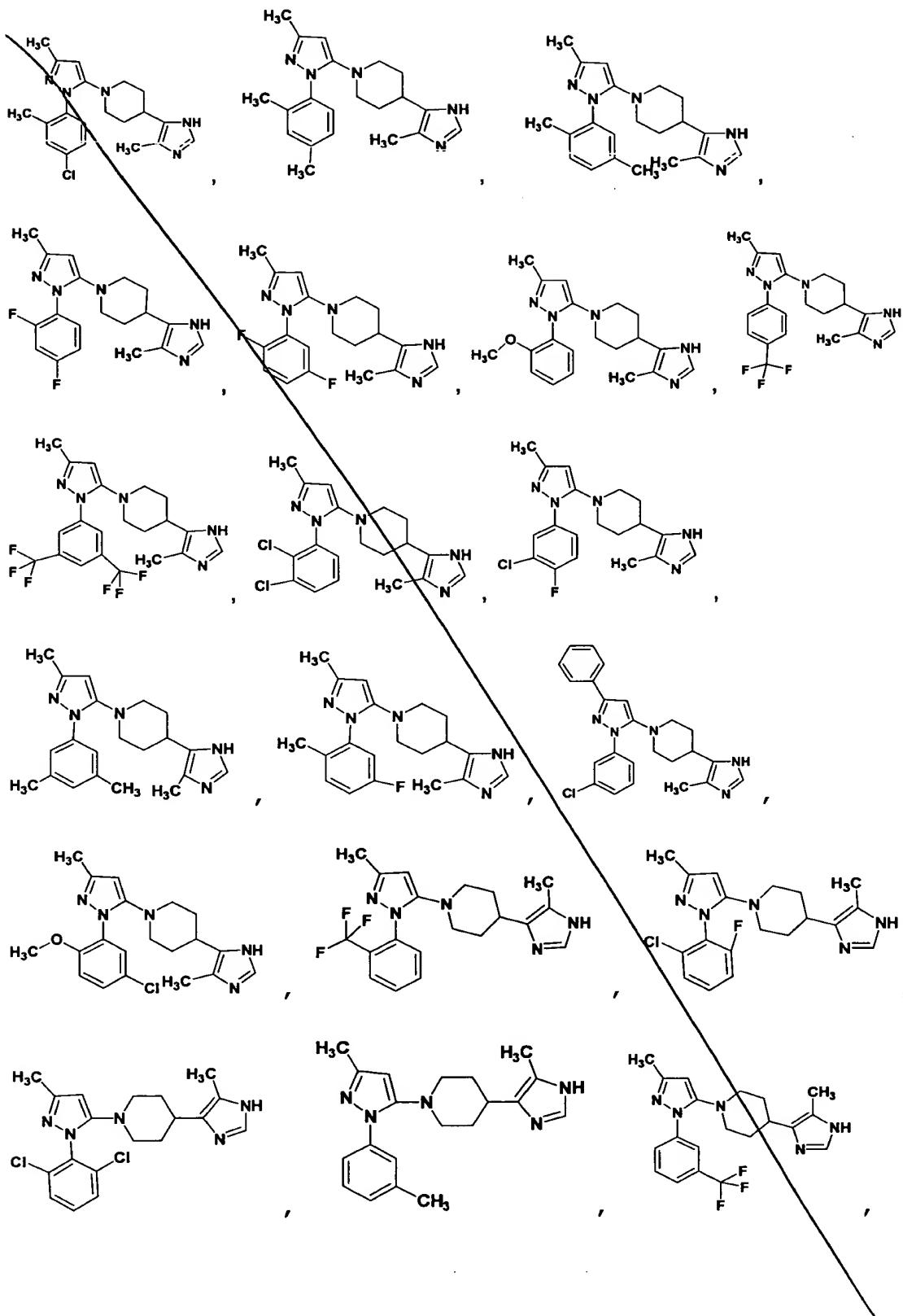


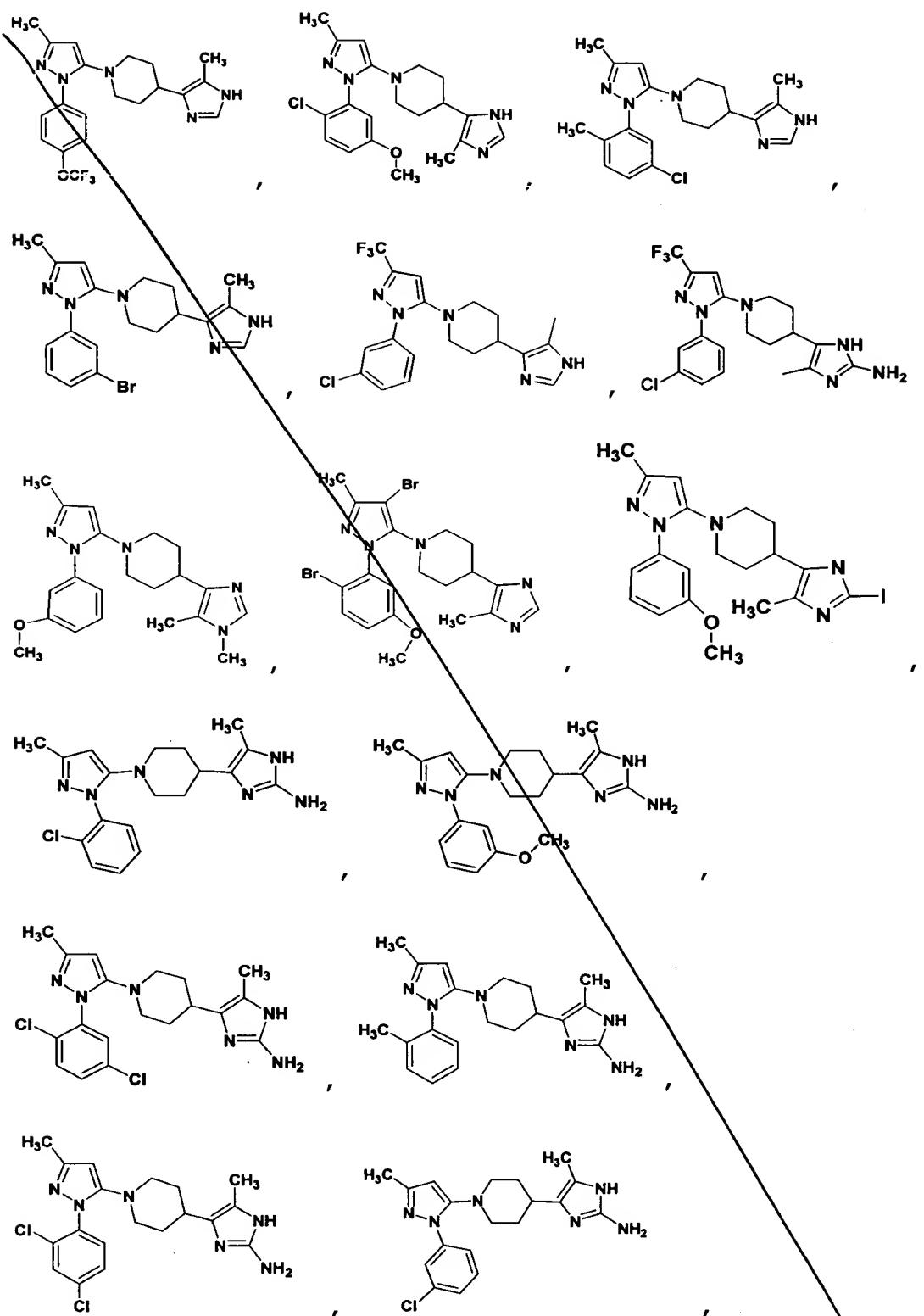
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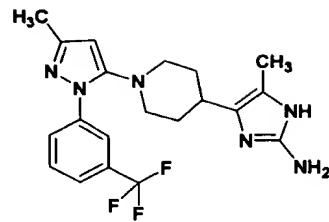
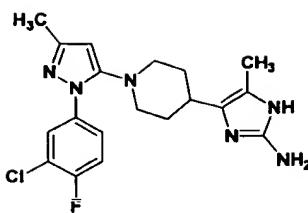
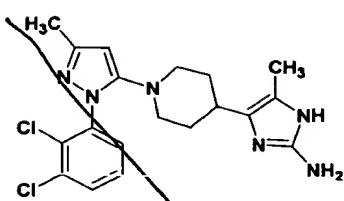
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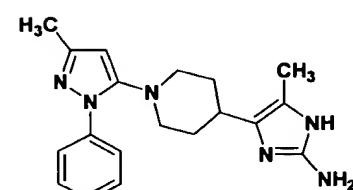
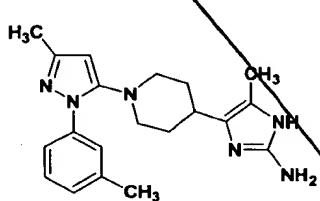
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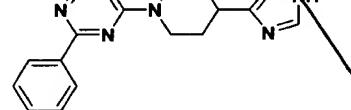
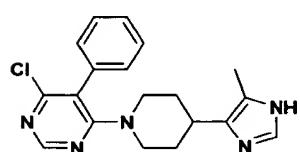
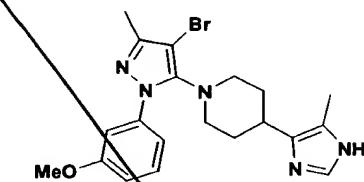
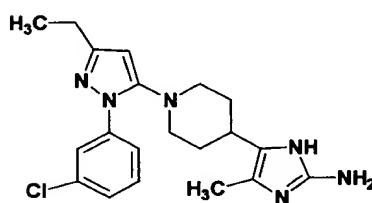




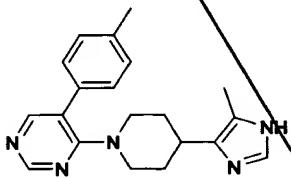
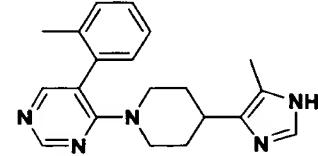
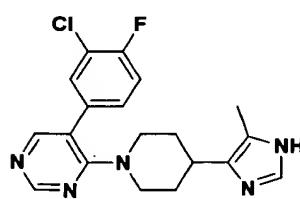
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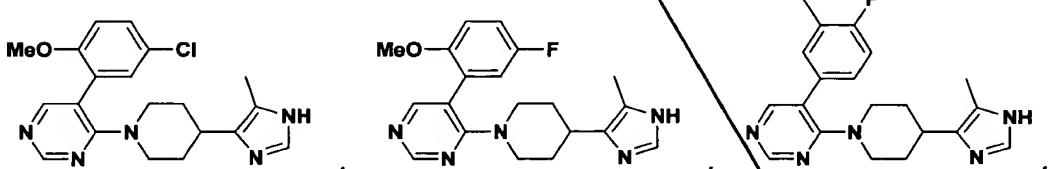
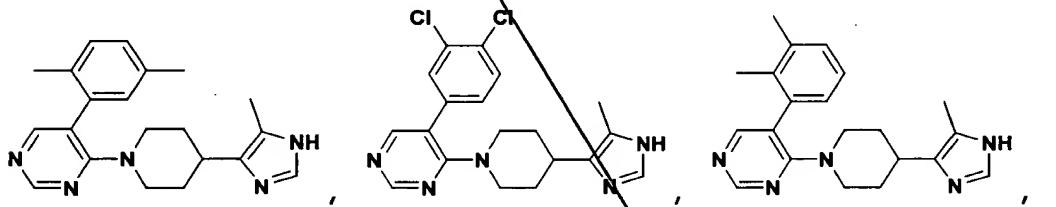
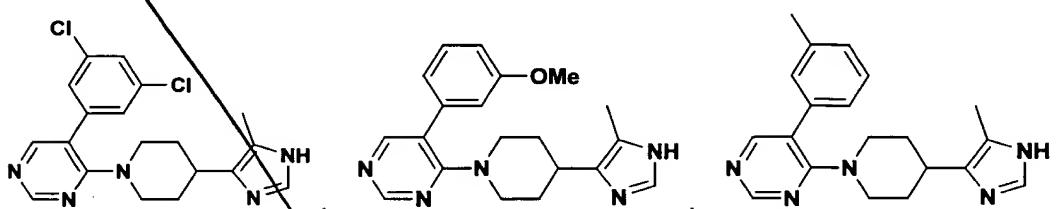
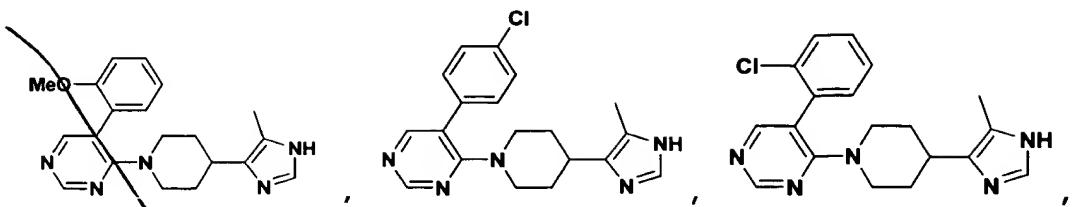
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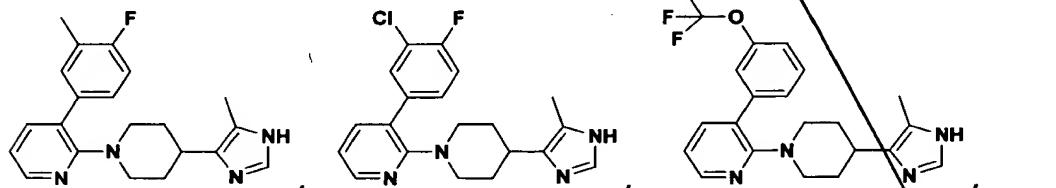
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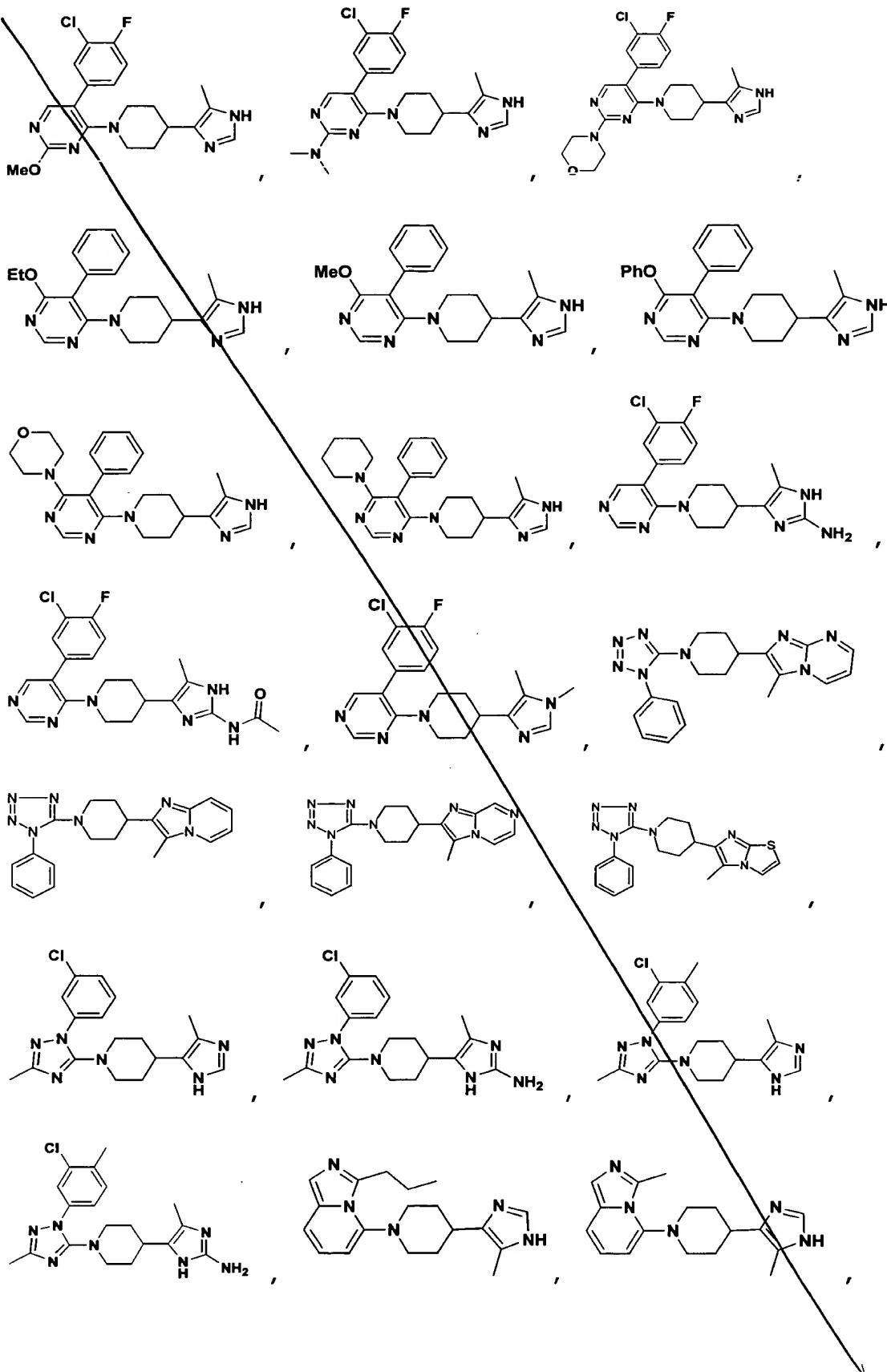
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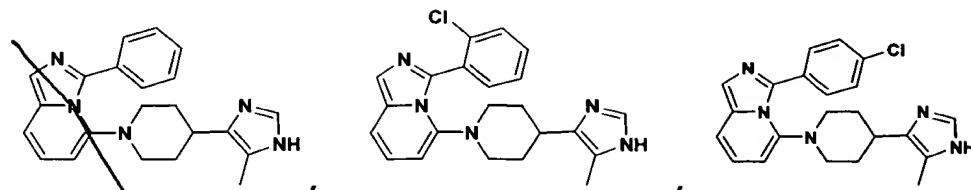


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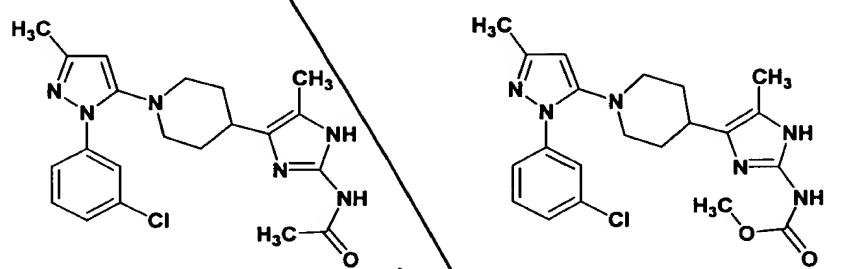
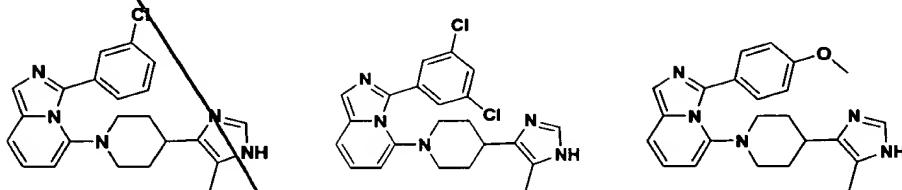


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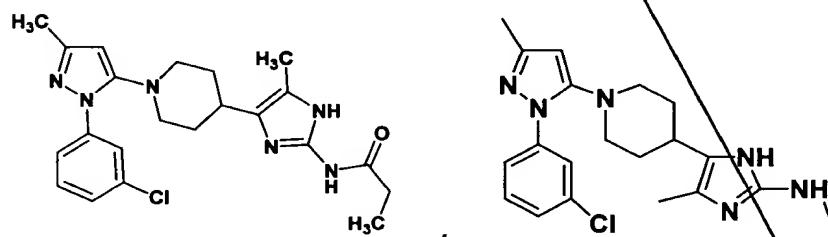
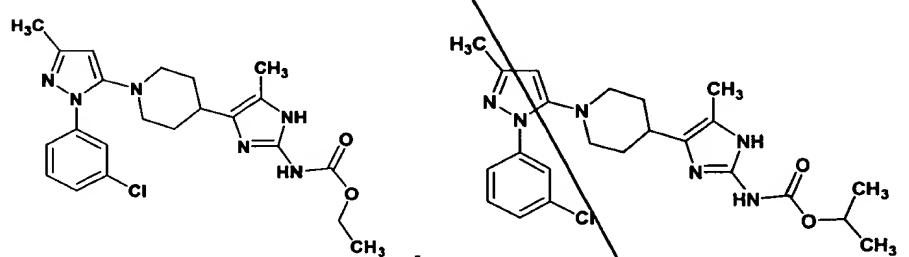




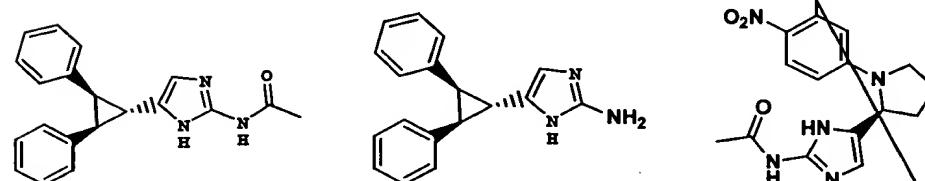
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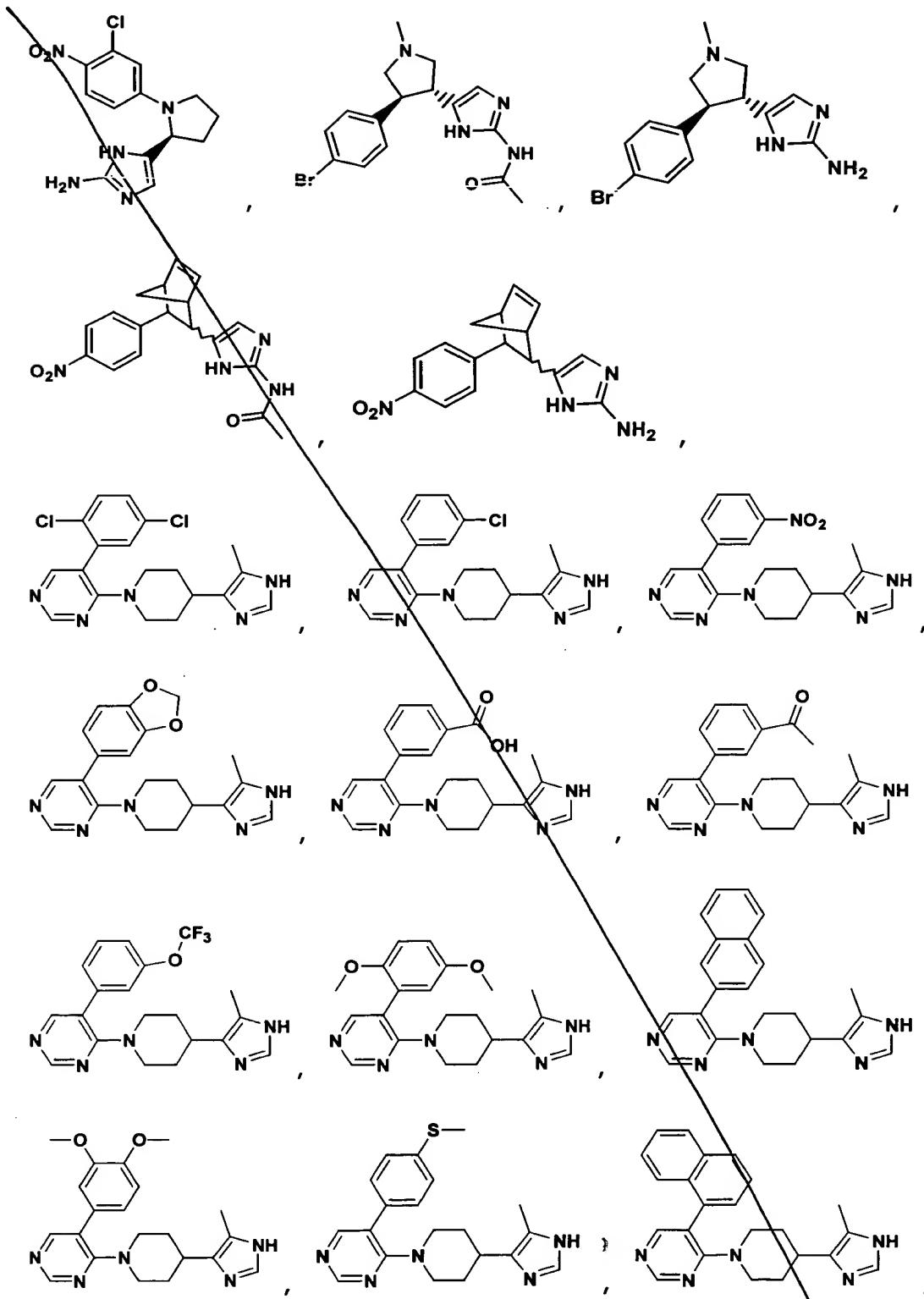


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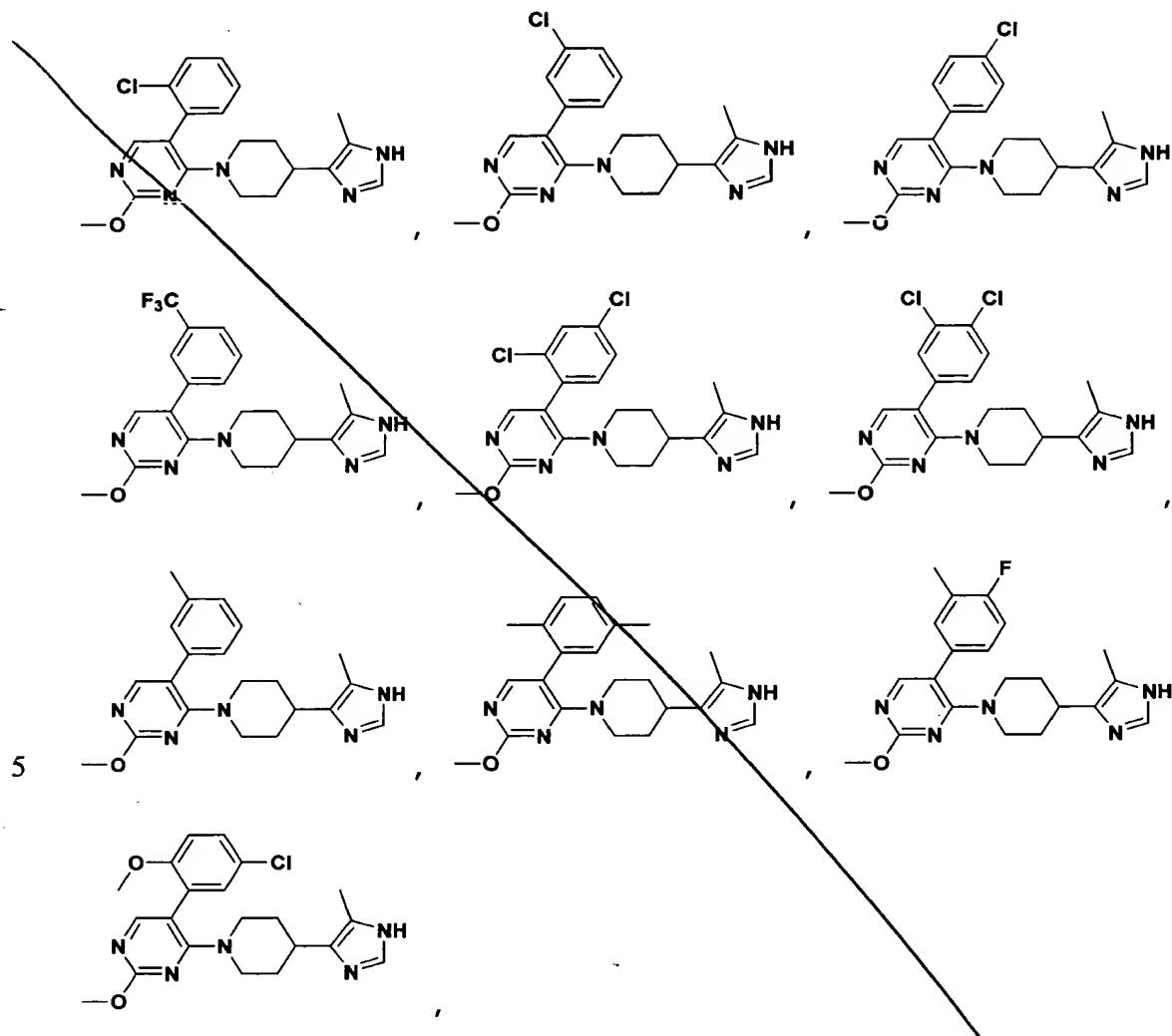


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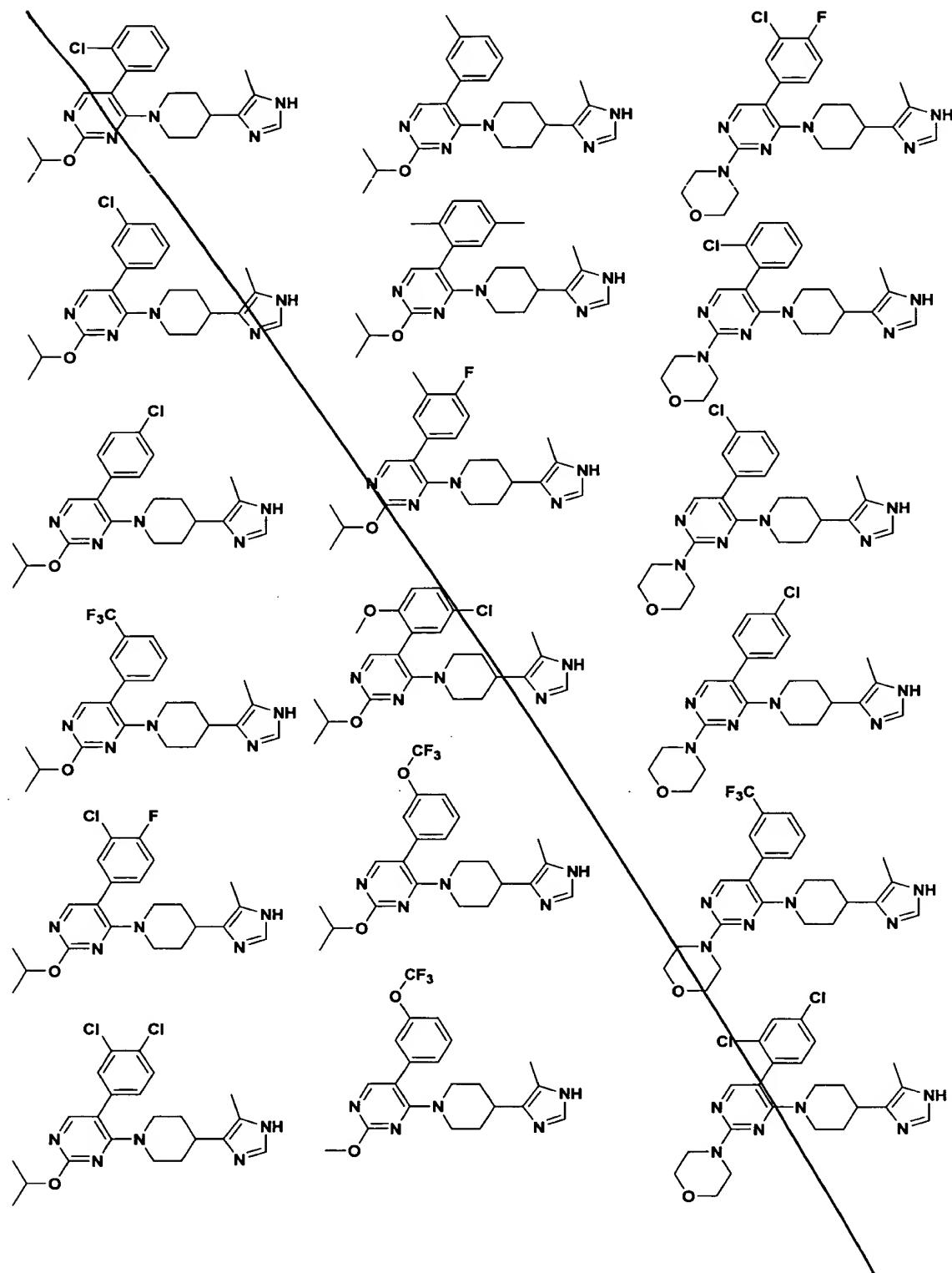


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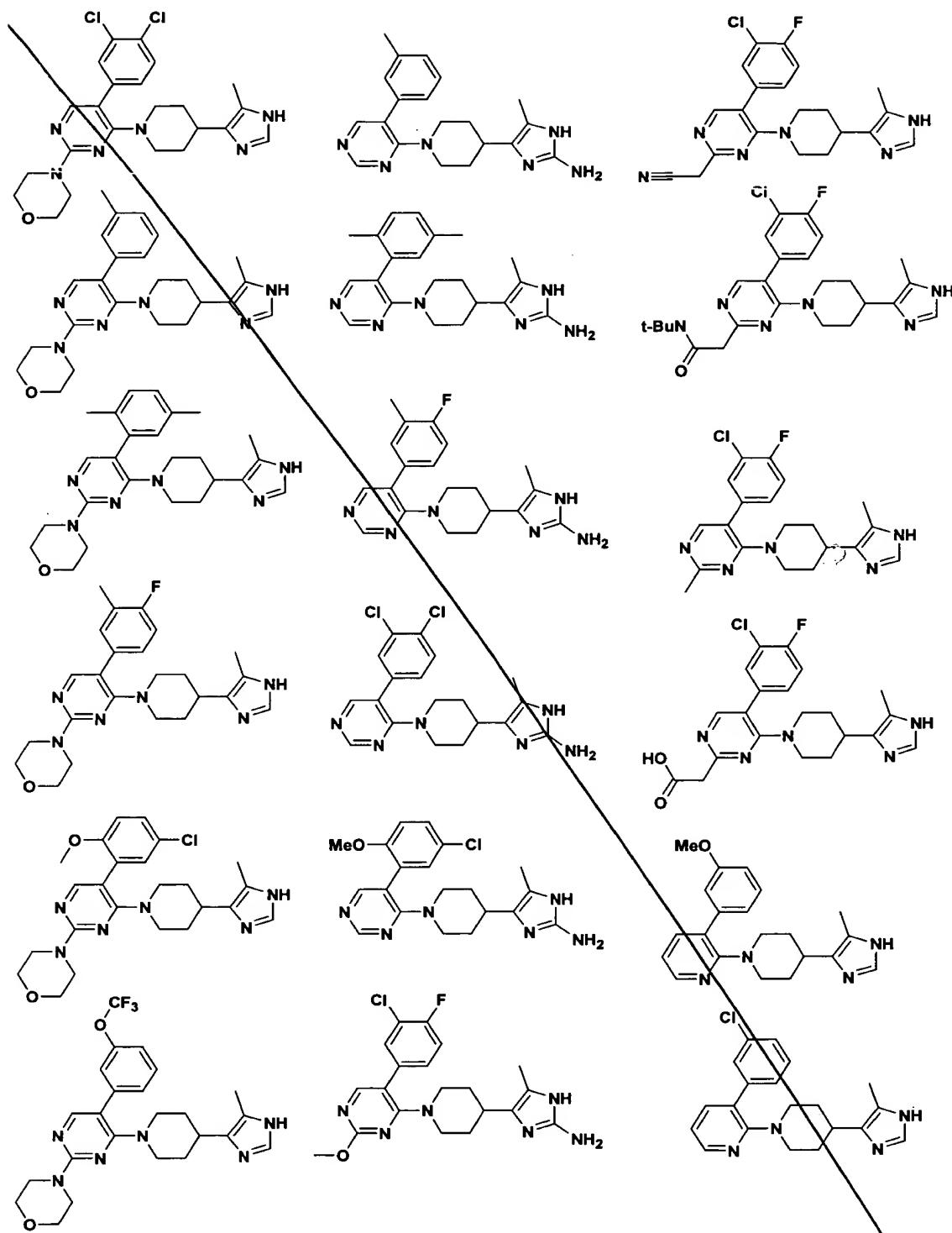


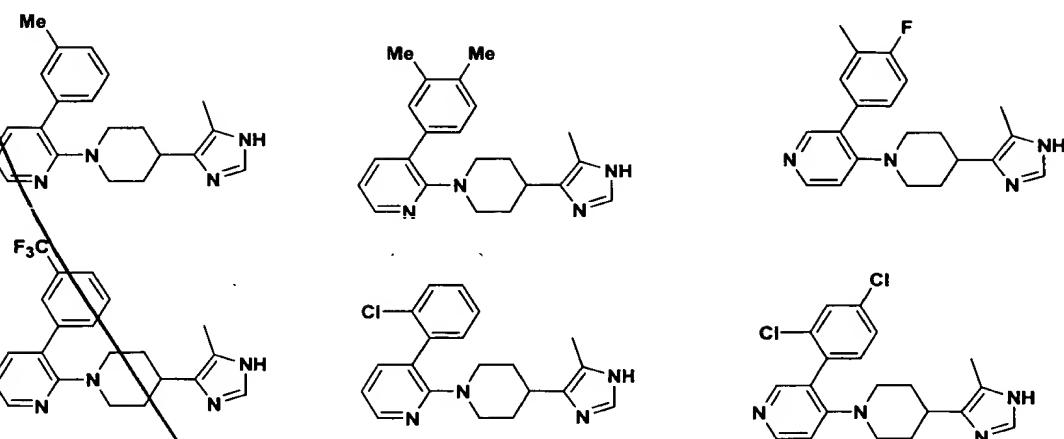
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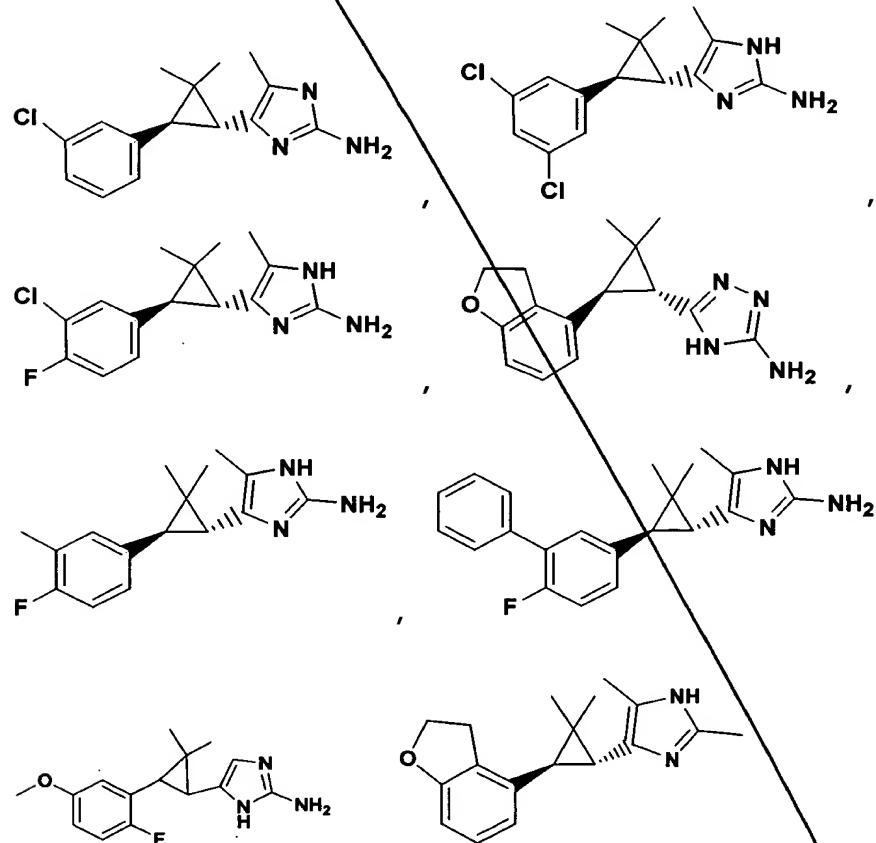
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29. The compounds as defined in Claim 1 having
the structure

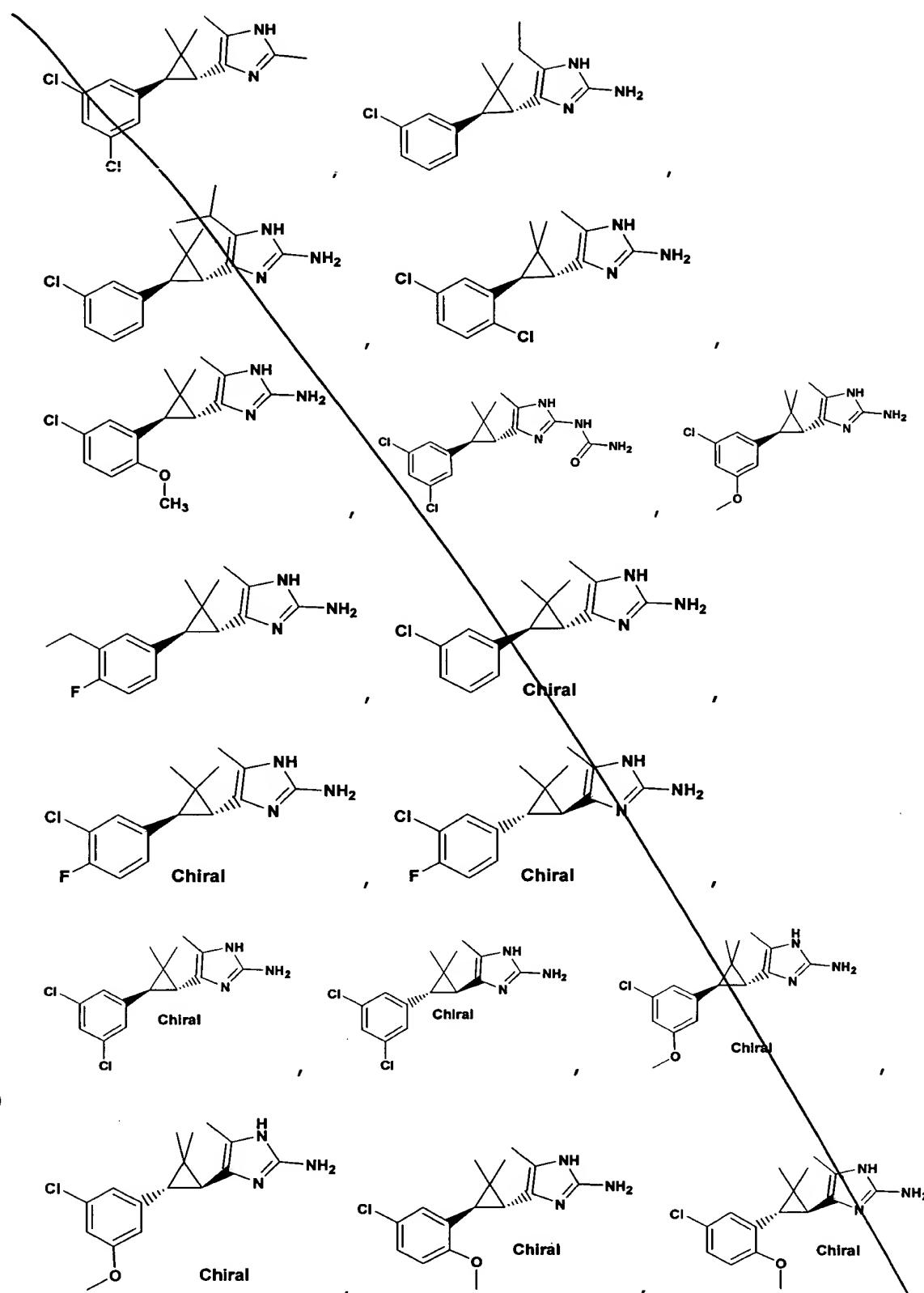
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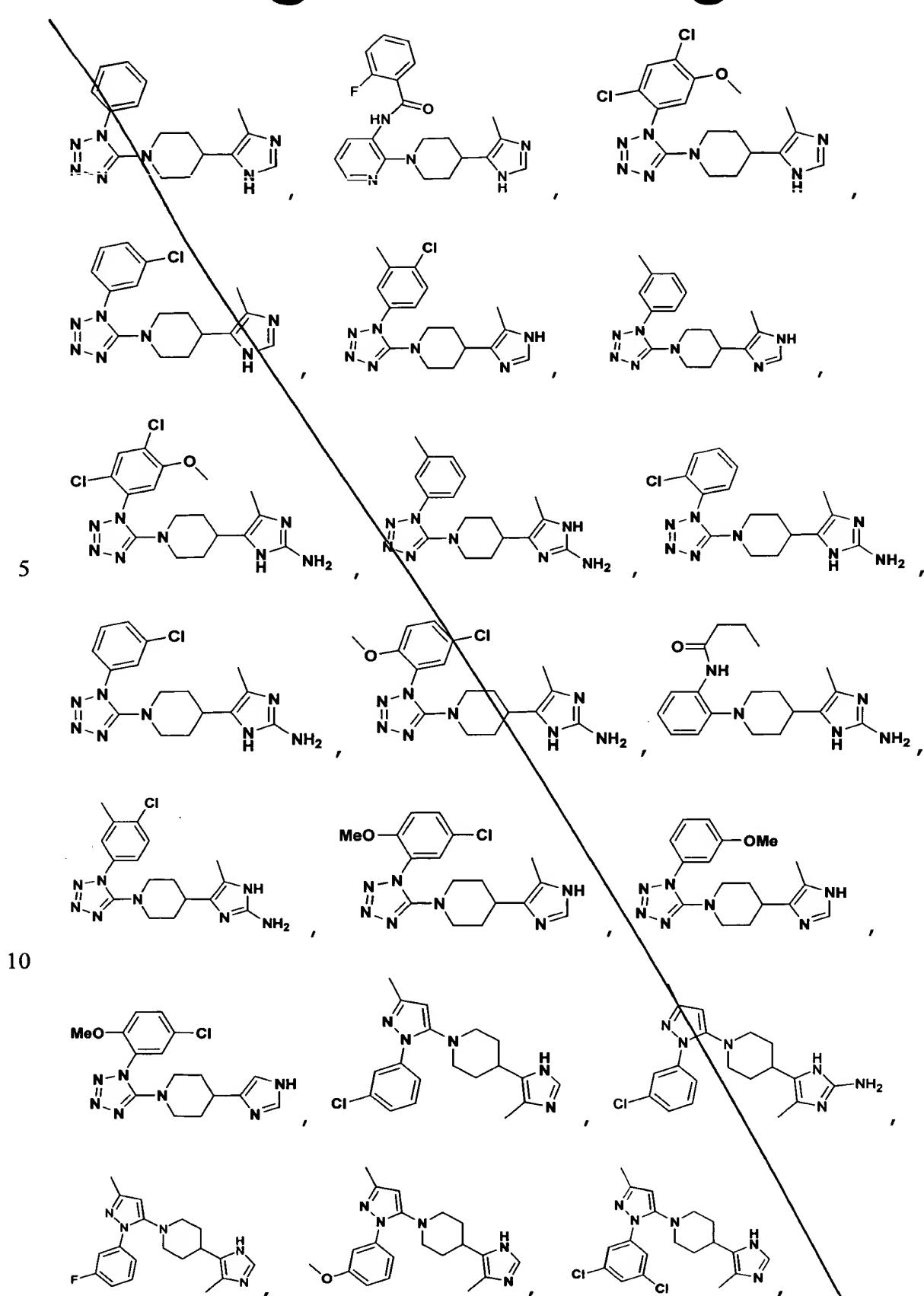


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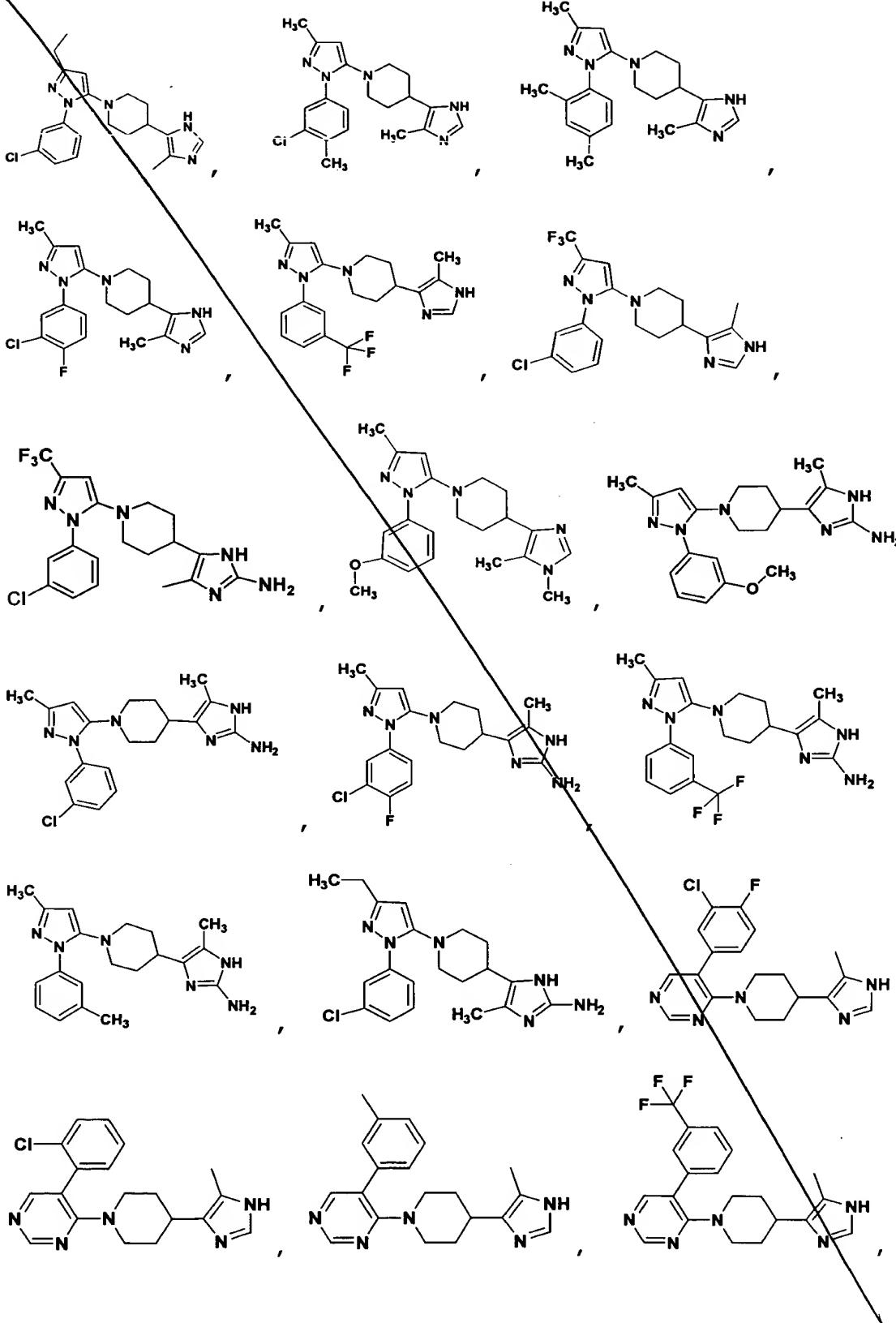
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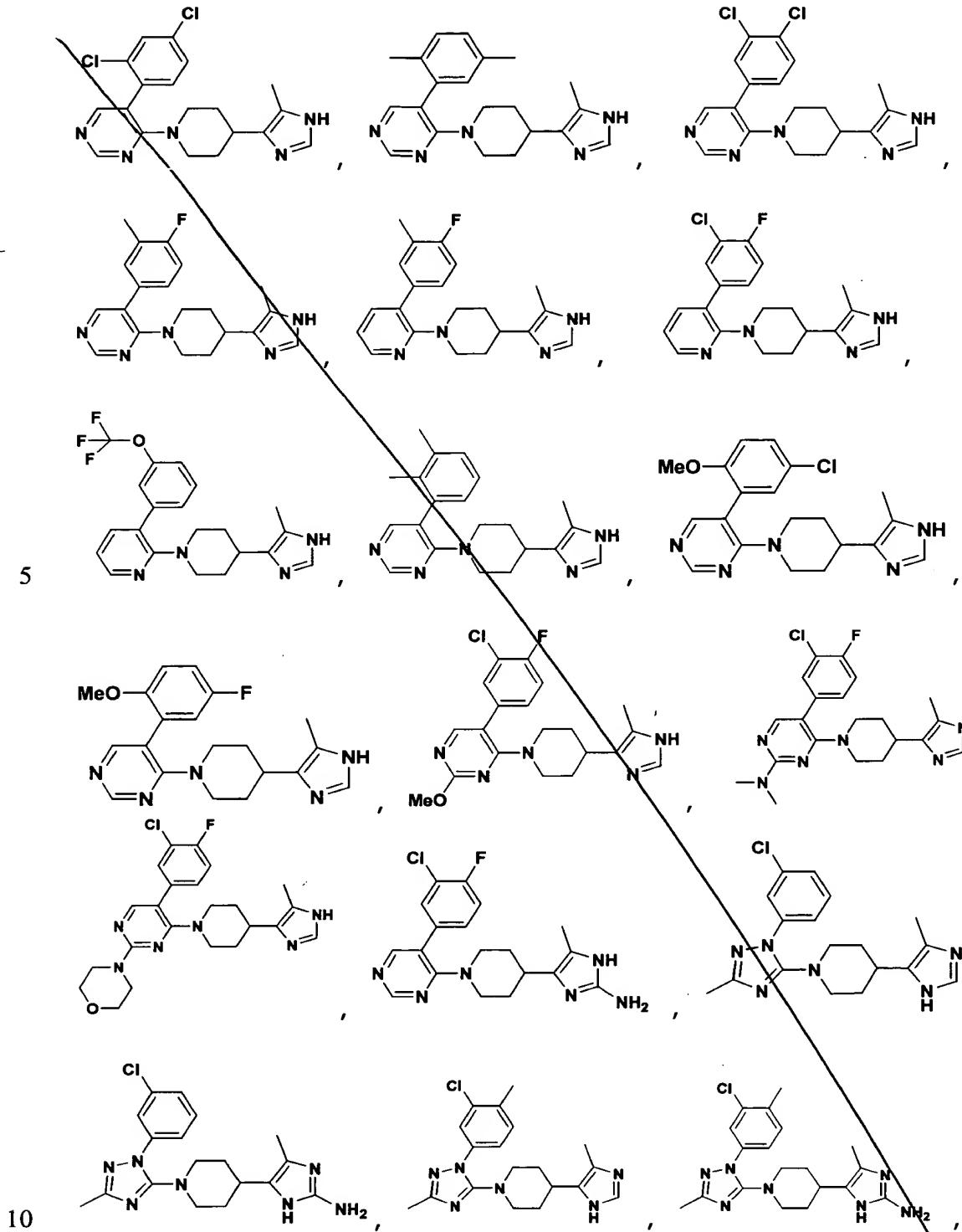
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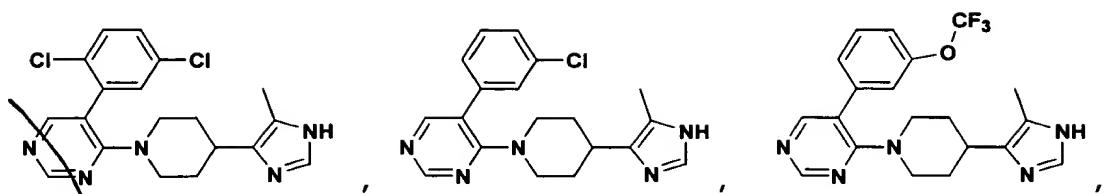


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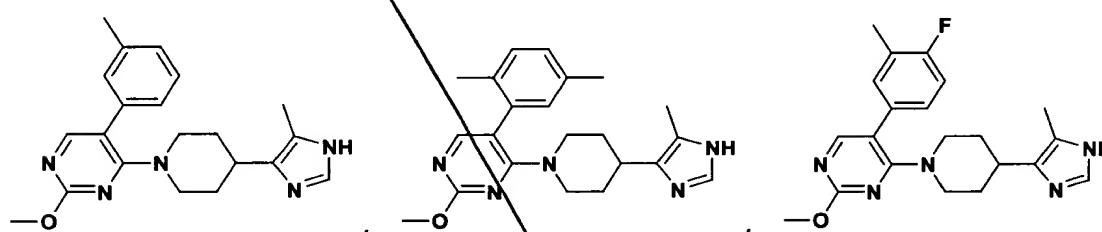
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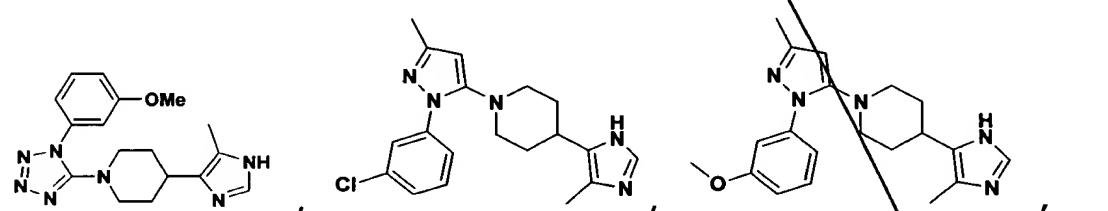
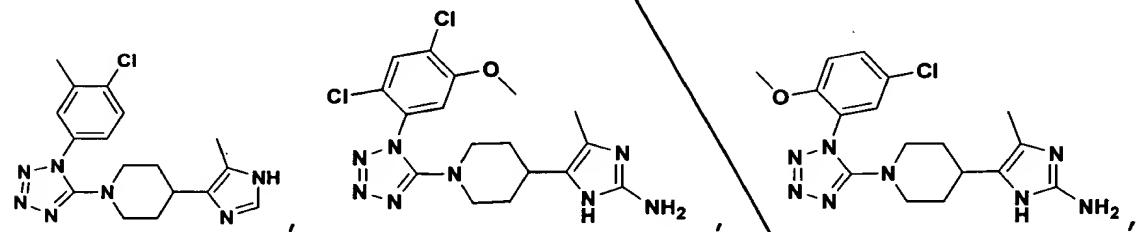


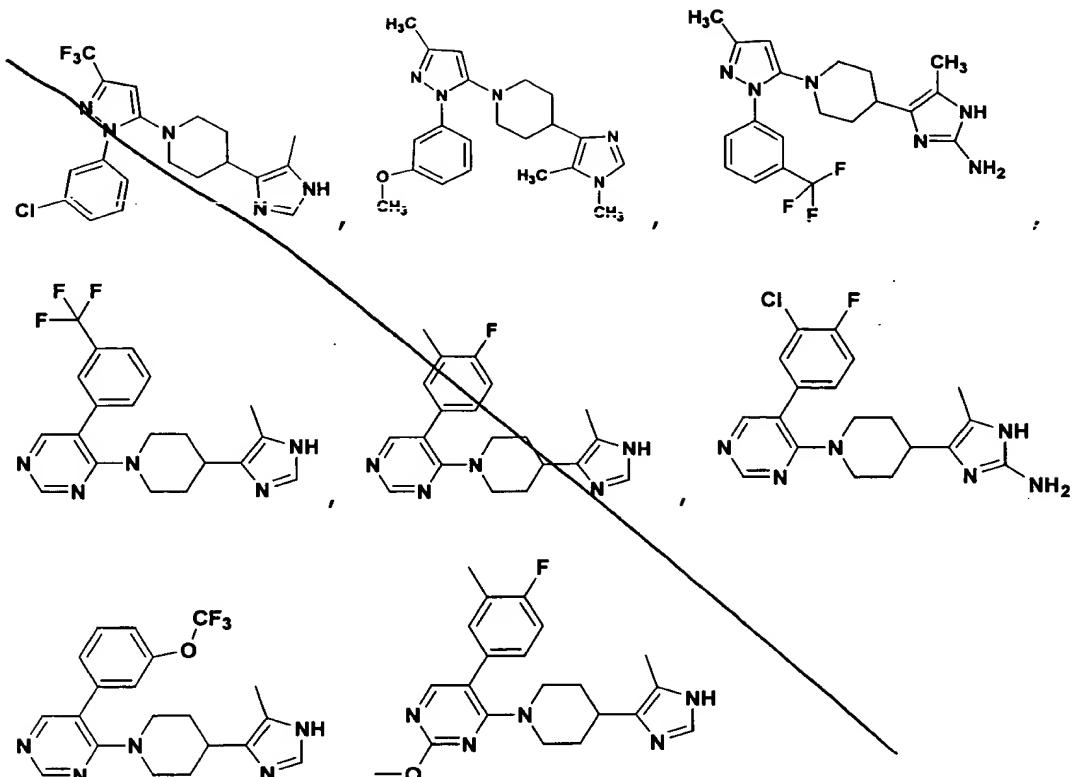
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30. The compound as defined in Claim 1 having the structure

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31. A pharmaceutical composition comprising a compound as defined in Claim 1 and a pharmaceutically acceptable carrier therefor

32. A method for preventing or treating disorders caused by intracellular acidosis during myocardial ischemia, hypertension, angina pectoris, cardiac arrhythmia, reperfusion injury, myocardial necrosis, cardiac dysfunction, LDL-cholesterol, renal disease or heart failure, which comprises administering to a mammalian species in need of treatment a therapeutically effective amount of a compound as defined in Claim 1.

33. A method for preventing or treating myocardial ischemia, which comprises administering to a mammalian species in need of treatment a therapeutically effective amount of a compound as defined in Claim 1.

34. A method for preventing or treating an ischemic condition, which comprises administering to a mammalian species in need of treatment a therapeutically

effective amount of an antiischemic agent which is a compound as defined in Claim 1.

35. A method for preventing or treating a peripheral vascular disorder, which comprises
5 administering to a mammalian species in need of treatment a therapeutically effective amount of an antiischemic agent which is a compound as defined in Claim 1.

36. A method for preventing or treating lower limb ischemia, which comprises administering to a mammalian
10 species in need of treatment a therapeutically effective amount of an antiischemic agent which is a compound as defined in Claim 1.

37. The method as defined in Claim 34 wherein the peripheral vascular disorder is an ischemic condition.

15 38. The method as defined in Claim 33 wherein the ischemic condition is lower limb ischemia.

39. The method as defined in Claim 33 wherein the ischemic condition is peripheral atherosclerotic disease.

20 40. The method as defined in Claim 36 wherein the peripheral atherosclerotic disease involves intermittent claudication.

41. The method as defined in Claim 34 wherein the peripheral vascular disorder is Raynaud's disease or LeRiches Syndrome.

25 42. A method for the relief of symptoms of pain, paresthesia or discomfort in the lower limb and gluteal regions produced by arterial insufficiency where symptoms are initiated or worsened with ambulation, which comprises administering to a mammalian species in need of treatment a therapeutically effective amount of a compound as defined in Claim 1.

30 43. A method for preventing or treating intermittent claudication, which comprises administering to a patient in need of treatment a therapeutically effective amount of a compound as defined in Claim 1.

44. A pharmaceutical combination comprising a compound as defined in Claim 1 in combination with tissue plasminogen activator (natural or recombinant), streptokinase, reteplase, activase, lanoteplase, 5 urokinase, prourokinase, anisolated streptokinase plasminogen activator complex (ASPAC), or animal salivary gland plasminogen activators.

45. A pharmaceutical combination comprising a compound as defined in Claim 1 in combination with a 10 platelet aggregation inhibitor, an inhibitor of α -2- antiplasmin, a thromboxane receptor antagonist, a prostacyclin mimetic, a phosphodiesterase (PDE) inhibitor, a thromboxane A synthetase inhibitor, a serotonin-2-receptor antagonist, a fibrinogen receptor 15 antagonist, aspirin, a hypolipidemic agent, an antidiabetic agent, an antihypertensive agent, a β -adrenergic agonist, an anticholinergic agent, an anti-inflamatory cortiocosteroid or an anti-inflammatory agent or an anti-arrhythmic agent and/or an 20 antiosteoporosis agent.

46. The pharmaceutical combination as defined in Claim 45 wherein the platelet aggregation inhibitor is clopidogrel, ticlopidine, or CS-747, or ifetroban or aspirin.

47. The pharmaceutical combination as defined in Claim 45 wherein the antihypertensive agent is omapatrilat, gemopatrilat, lisinopril, fosinopril, irbesartan, losartan, valsartan, carvedilol or amlodipine besylate.

48. The pharmaceutical combination as defined in Claim 45 wherein the β -adrenergic agonist is albuterol, terbutaline, formoterol, fenoterol, salmeterol, bitolterol, or pilbuterol, and the anti-inflammatory agent is beclomethasone, triamcinolone, flurisolide, 35 dexamethasone, budesonide, fluticasone, cromolyn, nedocromil, theophylline, zileuton, zafirleukast, monteleukast and pranleukast.

49. The pharmaceutical combination as defined in Claim 45 wherein the hypolipidemic agent is pravastatin, simvastatin, atorvastatin, fluvastatin, cerivastatin, AZ4522 or itavastatin.

5 50. A pharmaceutical combination comprising a compound as defined in Claim 1 and a lipid-lowering agent, an antidiabetic agent, an anti-obesity agent, an antihypertensive agent, a platelet aggregation inhibitor, and/or an antiosteoporosis agent.

10 51. The pharmaceutical combination as defined in Claim 50 comprising said compound and an antidiabetic agent.

15 52. The combination as defined in Claim 51 wherein the antidiabetic agent is 1, 2, 3 or more of a biguanide, a sulfonyl urea, a glucosidase inhibitor, a PPAR γ agonist, a PPAR α/γ dual agonist, an SGLT2 inhibitor, a DP4 inhibitor, an aP2 inhibitor, an insulin sensitizer, a glucagon-like peptide-1 (GLP-1), insulin and/or a meglitinide.

20 53. The combination as defined in Claim 52 wherein the antidiabetic agent is 1, 2, 3 or more of metformin, glyburide, glimepiride, glipyride, glipizide, chlorpropamide, gliclazide, acarbose, miglitol, pioglitazone, troglitazone, rosiglitazone, insulin, GL-
25 262570, isaglitazone, JTT-501, NN-2344, L895645, YM-440, R-119702, AJ9677, repaglinide, nateglinide, KAD1129, AR-HO39242, GW-409544, KRP297, AC2993, LY315902, P32/98 and/or NVP-DPP-728A.

30 54. The combination as defined in Claim 52 wherein the compound is present in a weight ratio to the antidiabetic agent within the range from about 0.001 to about 100:1.

35 55. The combination as defined in Claim 51 wherein the anti-obesity agent is a beta 3 adrenergic agonist, a lipase inhibitor, a serotonin (and dopamine) reuptake inhibitor, a thyroid receptor beta compound, an aP2 inhibitor and/or an anorectic agent.

56. The combination as defined in Claim 55 wherein the anti-obesity agent is orlistat, ATL-962, AJ9677, L750355, CP331648, sibutramine, topiramate, axokine, dexamphetamine, phentermine, phenylpropanolamine, and/or mazindol.

5 57. The combination as defined in Claim 51 wherein the lipid lowering agent is an MTP inhibitor, an HMG CoA reductase inhibitor, a squalene synthetase inhibitor, a fibrac acid derivative, an upregulator of LDL receptor activity, a lipoxygenase inhibitor, or an ACAT inhibitor.

10 58. The combination as defined in Claim 57 wherein the lipid lowering agent is pravastatin, lovastatin, simvastatin, atorvastatin, cerivastatin, fluvastatin, itavastatin, visastatin, fenofibrate, gemfibrozil, 15 clofibrate, avasimibe, TS-962, MD-700, cholestagel, niacin and/or LY295427.

20 59. The combination as defined in Claim 57 wherein the compound is present in a weight ratio to the lipid-lowering agent within the range from about 0.001:1 to about 100:1.

60. The combination as defined in Claim 50 wherein the antihypertensive agent is an ACE inhibitor, angiotensin II receptor antagonist, NEP/ACE inhibitor, calcium channel blocker and/or β -adrenergic blocker.

25 61. The combination as defined in Claim 60 wherein the antihypertensive agent is an ACE inhibitor which is captopril, fosinopril, enalapril, lisinopril, quinapril, benazepril, fentiapril, ramipril or moexipril;

30 an NEP/ACE inhibitor which is omapatrilat, [S[(R*,R*)]-hexahydro-6-[(2-mercapto-1-oxo-3-phenylpropyl)amino]-2,2-dimethyl-7-oxo-1H-azepine-1-acetic acid (gemopatrilat) or CGS 30440,

an angiotensin II receptor antagonist which is irbesartan, losartan or valsartan;

35 amlodipine besylate, prazosin HCl, verapamil, nifedipine, nadolol, propranolol, carvedilol, or clonidine HCl.

62. The combination as defined in Claim 50 wherein
the platelet aggregation inhibitor is aspirin,
clopidogrel, ticlopidine, dipyridamole or ifetroban.

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